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TEAM NUTRITION • USDA

A Menu Planner *for Healthy School Meals*

...to help you plan, prepare, serve, and market appealing meals.



U.S.D.A., NAL
APR 6 1999
Received

USDA

United States Department of Agriculture

Food and Consumer Service

3101 Park Center Drive

Alexandria, VA 22302-1500

Dear School Nutrition Services Directors and State Child Nutrition Directors:

We appreciate your leadership in improving the nutritional quality and acceptance of school meals—to promote the health and education of our children. To support and build on the progress schools have made, we are pleased to provide the enclosed *Menu Planner for Healthy School Meals.*

We encourage you to use this menu planner for training school cafeteria managers and their staffs. The planner includes not only what to do and how to do it—but also why. It emphasizes the connection between students' nutrition, their readiness to learn, and their future health. It links changes in meal preparation to current information about nutrition and health. This comprehensive training and learning tool can enable each school nutrition service professional to be a more proactive nutrition resource in the school community. You can use the detailed Table of Contents to help you select chapters—or combine topics from many chapters—to create a unique training package that is just right for your schools, based on the menu planning option you have selected.

We are making this newly revised and expanded version of the former *Menu Planning Guide for School Food Service* available to all schools that participate in the National School Lunch and Breakfast Programs. **To make receiving the menu planner as convenient as possible, we have asked all States whether they would prefer to: (a) have their schools' copies sent directly to the State Agency; or (b) have School Food Authorities order the copies. The following nine areas have chosen direct shipment to the State Agency: Hawaii, Mississippi, Nevada, New York, Ohio, South Carolina, the District of Columbia, Guam, and the Virgin Islands. FNS staff will call the State Child Nutrition Director in each of these areas to get the correct number of copies to send. For all other States, School Food Authorities will order copies for their local schools; please see the enclosed form for easy ordering instructions.**

Thank you for your invaluable assistance. I am proud of the progress we continue to make as we work together for nutritious school meals and healthy, well-educated children.

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Sincerely,

Dorothy Caldwell

Dorothy Caldwell
Special Assistant for
Nutrition and Nutrition Education

Enclosures

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Order Form

A Menu Planner *for Healthy School Meals*

FNS Publication Number: FNS-303

Please order no more than ONE copy for each school in your district. There is no charge for this publication or for delivery of it.

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National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
ATTN:Claudine DesLauriers
FAX: (703) 605-6852

A Menu Planner for Healthy School Meals

This is being sent to you by USDA's Food and Nutrition Service (FNS) to use in your school food service operation. There is NO charge. We hope you enjoy working with it!

Additional copies are available...

We are sending this copy of the menu planner to you as part of a distribution to 23,000 school food authorities nationwide. However, we have printed enough copies to provide one to every school participating in the National School Lunch Program.

Some states have requested that we send all of the schools' copies directly to the state office. Other states have asked that we send the schools' copies directly to school food authorities.

How you will obtain copies for the schools in your district will depend on which approach your state has chosen.

Here's how to order:

1. **Check the following list. State agencies in these areas will be ordering schools' copies directly from USDA:** Hawaii, Mississippi, Nevada, New York, Ohio, South Carolina, District of Columbia, Guam, and the Virgin Islands.

2. **If your state is NOT on this list, fill out the form on the back of this letter.** You may order one copy for each school in your district. The copies will be delivered to you, not to your individual schools.

For delivery purposes, please be sure to indicate a contact person as well as a phone number. Also please indicate a street address, since some carriers do not deliver to post office boxes.

Mail or fax the completed order form to:

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ATTN: Claudine DesLauriers
FAX: (703) 605-6852

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20250

Dear School Nutrition Services Director and Cafeteria Manager:

Thank you so much for your hard work every day to provide nutritious, appealing meals for the children you serve. USDA's Team Nutrition is pleased to support your efforts with this updated and expanded version of the *Menu Planner for Healthy School Meals.* This is the first major revision of the *Menu Planning Guide for School Food Service* since 1983. We know you will like the wealth of practical information, easy-to-read style, and attractive presentation.

The menu planner presents the basic concepts of the School Meals Initiative for Healthy Children--and then explains how to translate the concepts into real meals for real children in real schools. It emphasizes what you can do--not just what you have to do. For example, the planner:

- spotlights the school meals programs' nutrition goals, thoroughly discusses menu planning options, and explains nutrient analysis—see pages 19, 59, and 137;
- offers lots of tips for preparing healthy meals and modifying menus—see page 120 and pages 159 to 179;
- provides reproducible, prototype forms to help you with recordkeeping—see page 190;
- focuses on marketing and promoting your healthy meal choices with innovative ideas and a checklist—see page 209; and
- suggests ways to work with the principal and teachers to link the classroom and cafeteria—see page 215.

Along with the *Tool Kit for Healthy School Meals* recipes which were distributed in 1995, we hope you will find this planner a useful resource for planning and promoting your school meals program, and preparing and providing healthy meals that look good and taste great. We would like the entire school community to know what we know—that the cafeteria is a wonderful learning laboratory where children can practice and enjoy making nutritious food choices.

We look forward to continuing to work with you to enhance children's health and ability to learn—today, tomorrow, and throughout their lives.

Sincerely,

Shirley R. Watkins

Shirley R. Watkins
Under Secretary
Food, Nutrition, and Consumer Services

AN EQUAL OPPORTUNITY EMPLOYER



United States Department of Agriculture • Food and Nutrition Service
1998 • Publication Number FNS-303

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U.S. DEPARTMENT OF AGRICULTURE • FOOD AND NUTRITION SERVICE • FNS-303 • 1998

A Menu Planner for Healthy School Meals

...to help you plan, prepare, serve, and market appealing meals.



You Are A Vital Link to Children...

You can help children be healthier, now and in years to come.

As a school food service professional, you are part of a proud tradition.

Since 1946, the National School Lunch Program has provided financial support and federally purchased commodities to help schools and residential child care institutions serve nourishing, well-balanced meals to children. Many schools have also joined the School Breakfast Program to offer morning meals that help children be ready to learn.

While these programs have always been a partnership between the federal government, states, and local communities, you and your colleagues in schools have been — and still are — *the vital link* to children.

Today, your role is even more important than ever.

Research has shown that there is a *crucial* relationship between nutrition and health, and nutrition and learning. Physicians and scientists across the country agree that what we eat — as children and as adults — can affect us in very significant ways. And, there's compelling evidence that diet-related diseases don't necessarily wait until our later years to get their start.



For example, a major factor in heart disease, a leading cause of death in this country, is fatty deposits in arteries, a condition known as arteriosclerosis. Medical studies of teenagers have indicated that these fatty deposits can begin to accumulate even in children.

Since the early days of school lunch, there have been significant changes in the way Americans eat. While the American diet may have provided adequate calories in the early 1940's, it was low in nutrients. Today, nutrient deficiencies are rare, and many of our common problems are now related to a lack of variety and balance, and to overconsumption and inadequate physical activity.

Americans typically consume more calories than they expend, which can lead to overweight and obesity. Many of us also eat more fat, saturated fat, cholesterol, and sodium than is recommended—and too few grains, vegetables, and fruits.

You can make a difference.

Along with other members of the education community, you can help reverse these trends by offering healthy food choices to children. In fact, you're in a special position to show children what it means to eat for good health, including how important it is to eat a variety of foods.

You and your colleagues across the country have played a huge part in our nation's battle against hunger and malnutrition. You've made a difference in the lives of millions of children. The food you provide helps them be ready to learn. The choices you offer can help them build healthy lifestyles.

Use this menu planner from USDA to help you work toward your goal.








Here's what this menu planner includes:

- **For starters, you will find information on the nutrition goals established by the *School Meals Initiative for Healthy Children.***

  As a result of this initiative, there are now age-appropriate nutrition *and* calorie goals for lunches and breakfasts.

  These nutrition goals for school meals are based on: the Recommended Dietary Allowances (RDA), children's calorie needs, and the Dietary Guidelines for Americans. This planner gives you background on each of these and explains why they are important.

  It also explains how the nutrition goals will affect the way you plan your meals to be reimbursable under program rules — and the way your state agency will review your meals for compliance with program rules.

- **You will also find information on some alternative menu planning systems that can help you achieve the nutrition goals.**

  In addition to the Traditional Food-Based Menu Planning system, USDA has established an Enhanced Food-Based system as well as two Nutrient-Based systems, called Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP). This planner introduces these systems, explains the differences between them, and gives you an idea of how you can use each to plan a typical meal.

  Using text and charts, Chapters 2 and 3 explain important features of interest to you, such as: nutrient standards; age/grade groups used; criteria for a reimbursable meal; meal structure for lunch and for breakfast; how Offer versus Serve works for lunch and for breakfast; use of standardized recipes; processed foods; production records; and child nutrition labeling.

  You, or your school district, get to choose the system that's right for you, so you will want to know the basics of each system.

- **In addition, this menu planner offers practical suggestions for making simple changes to create healthy school meals.**

  These include a variety of ways to modify breakfast and lunch menus to meet the Dietary Guidelines, such as serving more grains, vegetables, and fruits, and offering a greater variety of lowfat foods, including fat-free and 1-percent-fat milk.

  You will also find ideas for *serving* foods — such as salsas for fresh flavor and less fat — and making substitutions, like using lowfat mayonnaise and salad dressings.

  There are also tips on *preparing* foods in different ways, such as baking French fries rather than deep-frying them, or serving baked potatoes instead.

- **Despite your best efforts, kids can be hard to convince. That's why the final chapter addresses marketing healthy school meals.**

  You will find strategies that have worked for some of your colleagues, such as having classroom tasting parties and planning special promotions.





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CHAPTER 1

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

You Can Meet the Nutrition Goals in a Variety of Ways



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CHAPTER 1 You Can Meet the Nutrition Goals in a Variety of Ways **1**

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CHAPTER 1

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

You Can Meet the Nutrition Goals In a Variety of Ways

Since the early days, the school meals programs have been aimed at safeguarding children's health and well-being. USDA's *School Meals Initiative for Healthy Children* reinforces this goal by:

- establishing specific nutrition goals for school breakfasts and school lunches
- making available some additional menu planning alternatives to help you meet these nutrition goals

In this chapter, we'll take a general look at the menu planning systems USDA has established, including the Traditional approach. We'll see what the alternative approaches have in common with the Traditional system and what they offer that's new. In later chapters, we'll focus on how each system works and the steps you will use to plan a typical menu.

Throughout, we'll keep in mind the nutrition goals established by USDA's *School Meals Initiative for Healthy Children.* These nutrition goals are based on:

- the Recommended Dietary Allowances
- children's calorie (energy) requirements
- the recommendations of the Dietary Guidelines for Americans

You will find important information on the nutrition goals and the basis for them in this chapter. If you are interested in the exact wording of these goals in the rule USDA issued in June 1995, see the *Federal Register,* Volume 60, Number 113.

Choosing the Menu Planning System That's Right for You

■ **It's a good idea to consider the merits of each before making up your mind. Here's an overview:**

Schools have traditionally used a Food-Based Menu Planning system that requires specific food components be served in certain amounts.

With this system, you have worked with four components — Meat/Meat Alternate, Grains/Breads, Vegetables/Fruits, and Milk — and two established age/grade groups for lunch (specifically, one for Grades K through 3, another for Grades 4 through 12). There's also been an optional age/grade group (for Grades 7 through 12), and your school may have chosen to use this as well.

The Traditional Food-Based Menu Planning system remains one of your options and you may continue to use this system and the customary age/grade group (or groups). However, you may find that one of the alternative menu planning systems helps you to target meals more closely to the needs of the children you serve.

The alternative menu planning systems have been specifically designed to provide optional ways for you to create menus consistent with the nutrition goals and nutrient standards. These systems will help you:

- provide adequate calories, nutrients, and dietary fiber for a specific age group
- reduce or limit fat, saturated fat, and cholesterol

Remember that the nutrition goals — *and* the nutrient standards designed to achieve these goals — apply to all menu planning systems. As a result, the nutrition goals and nutrient standards will affect the way the state agency monitors your meals for compliance with program requirements. This will be explained in more detail in later chapters.

We'll examine each of the menu planning systems in detail in subsequent chapters, but first, let's look at:

- *What the systems are called.*
- *What they have in common with each other and how they differ.*
- *What the nutrition goals are and what they mean for you as a school food service professional.*

Traditional Food-Based Menu Planning

The Traditional Food-Based Menu Planning system requires specific food group components in specific amounts for specific age/grade groups. It is the plan that schools have used since the National School Lunch Program was established in 1946 and the School Breakfast Program in 1966.

This approach uses **meal patterns** that were designed to provide over time:

- 1/3 of the Recommended Dietary Allowances (RDA) for key nutrients for specific age/grade groups for lunch
- 1/4 of the RDA for key nutrients for specific age/grade groups for breakfast

Because this system was designed before the Dietary Guidelines became part of school meal requirements, the meal plans do not have any *built-in* features that will help you serve meals that comply with these guidelines. You will need to give extra thought to planning meals that meet the nutrition goals — including target calorie levels — while reducing fat.

Enhanced Food-Based Menu Planning

Enhanced Food-Based Menu Planning is similar to the Traditional system — it requires specific food group components in specific amounts. However, there are *different* established age/grade groups. And, there are increased servings of Vegetables/Fruits and Grains/Breads. This approach uses **meal patterns** designed to:

- provide 1/3 of the RDA for key nutrients as well as 1/3 of calorie needs for specific age/grade groups for lunch
- provide 1/4 of the RDA for key nutrients as well as 1/4 of calorie needs for specific age/grade groups for breakfast
- help ensure consistency with the Dietary Guidelines

Nutrient Standard Menu Planning (NSMP)

NSMP takes a Nutrient-Based approach to menu planning. Instead of working with specific food components in specific amounts, the menu planner works with menu items. This approach requires a nutritional analysis of foods used in school meals. To do this, schools must use USDA-approved computer software that's widely available and easy to follow. When averaged over a school week, the **menu nutrient analysis** must:

- provide 1/3 of the RDA for specific nutrients as well as 1/3 of calorie needs for each age or grade group for lunch
- provide 1/4 of the RDA for specific nutrients as well 1/4 of calorie needs for each age or grade group for breakfast
- meet certain standards which help ensure that meals are consistent with the Dietary Guidelines for Americans

What about age/grade groups for NSMP? Here you have some extra choices. You can use the same age/grade groups as used for Enhanced Food-Based Menu Planning. Or, you can use the computer software to customize optional age groups.

Assisted NSMP

Assisted NSMP is exactly like NSMP *except* an outside consultant or other agency performs all of the functions of menu planning and nutrient analysis. If you do not have computer technology that will allow you to use NSMP, you may wish to choose Assisted NSMP. If computers become available, you can easily switch to NSMP.

USDA has published a comprehensive guide to help schools put together a menu planning system using Assisted NSMP. The guide contains cycle menus, recipes with nutrient analysis, food specifications, production records, and other helpful material. See Appendix 3 for more information.

You Are Working Toward Specific Nutrition Goals

- **No matter which menu planning option you choose, as a result of the *School Meals Initiative for Healthy Children,* you are now working toward meeting more specific nutrition goals than you have in the past. These are:**

  - **Recommended Dietary Allowances (RDA)**
    - **1/3 RDA for lunch**
    - **1/4 RDA for breakfast**
    - **Age appropriate**
  - **Calorie Goals**
    - **Age appropriate**
  - **Dietary Guidelines for Americans**

What does this mean for you? For many years, you have worked with lunch and breakfast meal patterns designed to provide a certain percentage of RDA for key nutrients. As you worked with these patterns, you did not have to be concerned with specific targets for individual nutrients — in fact, the program set no targets. And, equally important, there were no targets set for calories.

The *School Meals Initiative for Healthy Children* has changed this. There are now nutrient standards for school lunch and school breakfast menus. These nutrient standards establish the required level of calories and key nutrients to meet the nutrition goals for specific age or grade groups of children.

In other words, regardless of the menu planning option you follow, your breakfast and lunch menus, when averaged over a school week, should meet the nutrient standards for the selected age or grade group.

The nutrient standards for grades and ages are the same for Enhanced Food-Based Menu Planning, NSMP, and Assisted NSMP. With NSMP and Assisted NSMP, you have the extra flexibility of customizing age groups. Customizing age groups will allow you to know and provide the nutrients and calories that most closely meet the physiological needs of the children you serve.

A Closer Look at the Nutrient Standards

The nutrient standards for healthy school meals were established by averaging the Recommended Dietary Allowances (RDA) for key nutrients for different groups of children. The standards were set using the RDA because these are the best estimate of how much of a nutrient is required to adequately meet the known nutrient needs of practically all healthy people. Foods that naturally contain these nutrients also typically contain other essential nutrients not specified in the nutrient standards.

The nutrient standards set target goals for the following:

- **Calories**
- **Calcium**
- **Iron**
- **Protein**
- **Vitamin A**
- **Vitamin C**

Also, in keeping with the recommendations of the Dietary Guidelines, the nutrient standards set target goals for fat. These are:

- **No more than 30 percent of calories from fat.**
- **Less than 10 percent of calories from saturated fat. Keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.**

The nutrient standards do not set *specific* target goals for cholesterol, sodium, and dietary fiber. However, you will need to pay attention to these nutrients and dietary components.

In keeping with the *School Meals Initiative for Healthy Children,* your goal is to work to *reduce* cholesterol and sodium and *increase* dietary fiber.

WHY THE NUTRITION GOALS ARE IMPORTANT...

■ **Here's more information on the nutrition goals and the basis for them:**



The *School Meals Initiative for Healthy Children* established specific nutrition goals for school breakfasts as well as school lunches. These nutrition goals are aimed at...

- providing adequate calories and nutrients for specific age groups
- while reducing fat and saturated fat to recommended levels.

These goals are based on...

- the Recommended Dietary Allowances (RDA)
- children's calorie (energy) requirements
- the Dietary Guidelines for Americans

We'll look at each of these on the following pages, but first some background.

Why is nutrition so important?

We all know generally what nutrition is. It's the process by which our bodies take in and use food. But why is it so important? What does good nutrition provide?

Good nutrition provides the calories we need for energy and the nutrients essential for...

- proper growth, repair, and maintenance of body tissues
- resistance to disease and infection
- prevention of deficiencies that lead to problems such as anemia, goiter, scurvy, and rickets

In recent decades, medical researchers have found that good nutrition can also help reduce the risks of coronary heart disease and certain types of cancer.

In short, while we can sometimes *get by* with less than an optimum diet, to *thrive* we need a healthy diet. A healthy diet provides...

- essential nutrients and energy to prevent nutritional deficiencies and excesses
- the right balance of carbohydrate, fat, and protein to reduce risks for chronic disease
- a variety of foods including plenty of grains, vegetables, and fruits



Start With the Dietary Guidelines for Americans... End Up With Healthier Meals!

The best way to provide healthier food choices in school meals is to apply the core messages of the Dietary Guidelines for Americans to your menus and food items. In fact, the Dietary Guidelines are an important starting point for the nutrition goals set by the *School Meals Initiative for Healthy Children.*

What exactly are the Dietary Guidelines for Americans?

The Dietary Guidelines are a set of recommendations designed for healthy Americans age 2 years and older. They answer the basic question, "How should Americans eat to stay healthy?" They reflect the best available scientific and medical knowledge about food choices that promote health and help prevent chronic diseases.

The Dietary Guidelines are published jointly by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services. Every 5 years, as required by law, the guidelines are reviewed by a panel of experts to determine whether the existing standards should be altered and, if so, to recommend changes.

What do the Dietary Guidelines recommend?

Nutrition and Your Health: Dietary Guidelines for Americans (Fourth Edition, 1995) contains seven core recommendations. These are:

1. **Eat a variety of foods.**
2. **Balance the food you eat with physical activity — maintain or improve your weight.**
3. **Choose a diet with plenty of grain products, vegetables, and fruits.**
4. **Choose a diet low in fat, saturated fat, and cholesterol.**
5. **Choose a diet moderate in sugars.**
6. **Choose a diet moderate in salt and sodium.**
7. **If you drink alcoholic beverages, do so in moderation.**

Following the Dietary Guidelines is a great way to obtain the nutrients we need, have healthier and more active lives, and reduce the risk of chronic disease.

It's important to remember that these guidelines are meant to be applied to a diet over a period of time, not to one food or one meal. They call for moderation and the avoidance of extremes in the diet.

On pages 9 through 15 is more information on each of the Dietary Guidelines, along with some general menu planning tips for implementing them. You will find more specific tips for breakfast on pages 102 through 107 and for lunch on pages 108 through 113.

DIETARY GUIDELINE #1:
Eat a variety of foods.

This guideline is the cornerstone for building a healthy diet. Foods contain combinations of nutrients and other healthful substances. *No one food provides all the nutrients needed for good health.*

To make sure we eat all of the nutrients and other substances needed for health, we need to choose a variety of foods. There are no "good" or "bad" foods. All foods can be part of a healthful diet if balance is achieved.

A healthful diet contains the amounts of essential nutrients and energy needed to prevent nutritional deficiencies and excesses. It also provides the right balance of carbohydrate, fat, and protein to reduce risks for chronic disease. It can be obtained from a variety of foods that are available, affordable, and enjoyable.

Just how important is getting essential nutrients? A look at just two nutrients — calcium and iron — will give you a clue.

Calcium is an important mineral needed for healthy bones throughout life. It is essential to the development of sufficient bone mass during the growing years. Prevention of osteoporosis in later years is critically dependent on calcium intake during adolescence and young adulthood. Nearly half of the adult skeletal mass is developed during adolescence.

Many Americans, including teenage girls and older women, do not consume calcium in adequate amounts. There is a common misperception that milk and dairy products — the richest sources of dietary calcium — are fattening. However, by selecting lowfat or fat-free dairy items and other lowfat calcium sources, children and adults can obtain adequate calcium without getting too much fat.

Iron is a critically important nutrient that functions in the red blood cells to carry oxygen. It is another nutrient that many children do not consume in adequate amounts.

Iron-deficiency anemia directly impacts a child's readiness to learn. Children and youth with anemia usually are less attentive than their classmates and may fall seriously behind. Nutrition is clearly a significant factor in a child's short- and long-term readiness to learn.

Health professionals recommend that children get their iron through a variety of iron-rich foods, such as lean meat, cooked dry beans and lentils, leafy green vegetables, whole grains and fortified cereals. In addition, to help improve iron absorption, vitamin C-rich foods (such as citrus fruits and strawberries) should be eaten with foods high in iron.

As you plan school meals for children, keep in mind that it's important to obtain nutrients from a variety of foods, *not* from a few highly fortified foods or supplements. This is because:

- Just as children need nutrients for growth and health, they also need energy. Serving a variety of foods is the best way to provide children with adequate calories as well as nutrients.
- Relying on fortified foods or supplements may limit the nutrients in meals served to children.
- There are some nutrients for which requirements and functions have not yet been established, even though our bodies need and use them. A varied diet will help avoid shortages of these nutrients as well as others.



MENU TIPS FOR VARIETY:

Entrees:

Plan a different meat or meat alternate or a different combination of meat or meat alternates for each day in the week.

Follow a plan for providing a good variety of meats and meat alternates in main dishes.

Vegetables and Fruits:

Include raw or cooked vegetables in salads.

Plan to use raw or cooked fruits in fruit cups and desserts.

Use a different combination of two or more servings of vegetables and fruits each day. Include all forms — fresh, canned, frozen, and dried.

Grains and Breads

Plan to use a different kind of bread or bread alternate each day.

Include a variety of enriched rice, macaroni, noodles, and other pasta products.

Offer school-made loaf breads or hot breads, such as rolls, sandwich buns, muffins, biscuits, or cornbread as often as possible.

Look for more opportunities to use whole grains in your recipes and menus.

DIETARY GUIDELINE #2:
Balance the food you eat with physical activity — maintain or improve your weight.

Children need enough food for proper growth and normal development. Calorie needs of children differ due to body size, growth spurts, and varying levels of physical activity.

Obesity in childhood is a growing problem in our nation. A poor diet and a sedentary lifestyle are the major contributors. Health professionals recommend that childhood obesity be prevented by increasing physical activity. They also recommend teaching children to eat grains, vegetables, fruits, as well as lowfat dairy and other protein-rich foods.

MENU TIPS FOR MAINTAINING HEALTHY WEIGHT

Serve plenty of vegetables and fruits.

Serve more pasta, rice, breads, and cereals without fats and sugars added in preparation or at the table.

Serve less fat and fewer high-fat foods.

Serve desserts and sweets in moderation.

DIETARY GUIDELINE #3:
Choose a diet with plenty of grain products, vegetables, and fruits.

Most of the calories in a diet should come from grain products, vegetables, and fruits. These foods provide vitamins, minerals, complex carbohydrates (starch and dietary fiber), and other substances that are important for good health. They are usually low in fat, depending on how they are prepared.

Researchers continue to study the role of fiber in healthy diets and in decreasing the risk of chronic diseases. Some of the benefits associated with a high-fiber diet come from other components present in these foods, not just from fiber itself. Therefore, fiber is best obtained from foods rather than supplements.

MENU PLANNING TIPS FOR INCREASING GRAINS, VEGETABLES, AND FRUITS

Side Dishes

Offer vegetables higher in fiber such as cooked dry beans, broccoli, tomatoes, leafy greens, potatoes with skin, and carrots.

Offer raw vegetable salads.

Offer vegetarian baked beans.

Offer whole or cut-up fresh fruits higher in fiber such as those with edible skins — apples, pears, nectarines, peaches — and those with edible seeds such as berries and bananas.

Grains

Offer quick breads, muffins, crackers, or cookies made with whole grains or whole-grain flours (examples of whole-grain flours are masa, whole-wheat flour, oats, bulgur, and barley).

Serve a variety of pasta salads.

Offer whole-grain breads and cereals at breakfast and for snacks.

Gradually modify recipes to include increasing amounts of whole grains or whole-grain flours.

DIETARY GUIDELINE #4:
Choose a diet low in fat, saturated fat, and cholesterol.

In general, health professionals believe that food habits established in childhood are important in preventing heart disease later in life. They recommend reducing the risk of heart disease by decreasing the amount of total fat, saturated fat, and cholesterol in the diet.



Changes to reduce the amount and type of fat in meals must be practical and acceptable. Children over the age of 2 years should gradually adopt a diet that, by about 5 years of age, contains *no more than 30 percent* of calories from fat.

As children begin to consume fewer calories from fat, they should replace these calories by eating more grain products, vegetables, fruits, and lowfat dairy products and other protein-rich foods.

MENU PLANNING TIPS FOR REDUCING FAT

Entrees

Offer lean meats, fish, poultry, as well as cooked dry beans, dry peas, and lentils. Consider serving dishes that combine meat or meat alternate with grains — beans and rice, for example.

Choose entrees without added fat.

Side Dishes

Offer reduced-fat or nonfat salad dressings.

Balance higher fat foods in menus with items lower in fat. For example, with chicken nuggets serve baked potatoes or steamed fresh vegetables rather than French fries.

Grains

Provide a selection of lower fat grain products such as bagels, English muffins, and pita bread.

Serve jam, jelly, or honey on bread and rolls in place of high fat spreads.

Increase the variety of lowfat grain products such as noodles, brown rice, barley, and bulgur.

Milk Choices

Encourage choices that are lower in fat. Offer lowfat (such as 1 percent) and fat-free (skim) milk to help decrease the fat content of meals.

DIETARY GUIDELINE #5:
Choose a diet moderate in sugars.

Offer and use sugars in moderation. Sugar and high-sugar foods supply calories but may be limited in nutrients like vitamins and minerals.

Sugar comes in many forms, including: table sugar; brown sugar; raw sugar; honey; syrups; corn sweetener; high-fructose corn syrup; molasses; and fruit juice concentrates. Sugar is present in milk as lactose.

MENU PLANNING TIPS FOR MODERATING SUGAR

Use fruits packed in light syrup or juice. These will be sweet, so there's no need to add extra sugar.

Offer grain-based desserts made with whole grains or whole-grain flour. Add fruits, vegetables, and nuts for added flavor and texture.

Use fresh or frozen fruit desserts.

DIETARY GUIDELINE #6:
Choose a diet moderate in salt and sodium.

Sodium occurs naturally in foods, usually in small amounts. Most Americans eat more sodium chloride (known commonly as salt) and sodium than they need. Most of this excess comes from processed foods rather than from salt added in cooking or at the table.

Sodium is associated with high blood pressure. Some studies show that consuming less salt or sodium may lower the risk for high blood pressure in certain population groups. When children learn to enjoy meals and snacks without excess salt, they may be protecting themselves from future health problems.

MENU PLANNING TIPS FOR REDUCING SALT AND SODIUM

Entrees

When serving ready-made foods, especially processed products, check the sodium content and select foods that have less — for example, those using herbs and spices.

When preparing foods, use lower sodium products. Review recipes for ways to reduce sodium, such as substituting herbs and spices for salt.

Side Dishes and Grains

When serving salted snacks such as crackers, pretzels, or nuts, offer them in smaller amounts.

Serve smaller amounts of condiments such as mustard, catsup, relish, and salad dressing.

Offer salt-free seasonings as an alternative to the salt shaker.

DIETARY GUIDELINE #7:
If you drink alcoholic beverages, do so in moderation.

Children and teens should not drink alcoholic beverages. Use of alcoholic beverages involves risks to health and other serious problems.

Support school programs that encourage children to choose a drug-free and alcohol-free lifestyle. Use health fairs to promote these programs along with good eating habits.

PUTTING IT ALL TOGETHER...

Simple changes, taken one at a time, can add up to a lifetime of better eating habits. The key is to make changes that are right for you and your customers.

Here are some techniques that can help you apply the Dietary Guidelines for Americans to your menus:

- Remember that children are the prime focus.
- Make gradual changes over time.
- Provide tasty and interesting food choices.

For best results, integrate the food service program with the entire school:

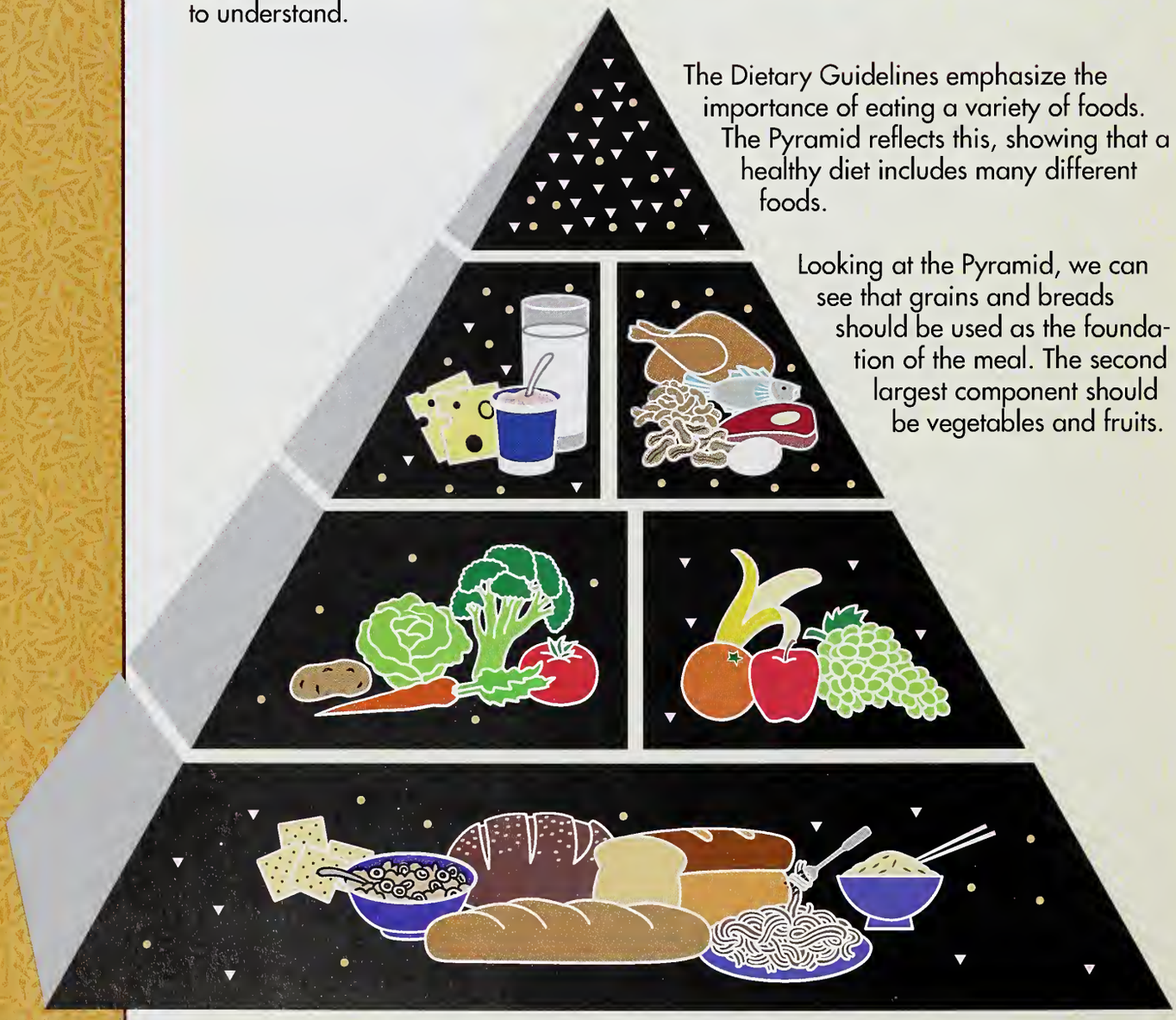
- Promote the program in the school and with parents in the community.
- Work closely with teachers to coordinate nutrition education in the classroom and cafeteria.
- Enlist the support of administrators and boards of education to develop policies that support healthy eating.
- Set small goals and achieve them—success promotes success.

The Food Guide Pyramid:

A Great Tool for Planning Menus And for Teaching Kids



The Food Guide Pyramid is a visual representation of the recommendations contained in the Dietary Guidelines for Americans. It's a simple and effective tool that's easy for even young children to understand.



The Dietary Guidelines emphasize the importance of eating a variety of foods. The Pyramid reflects this, showing that a healthy diet includes many different foods.

Looking at the Pyramid, we can see that grains and breads should be used as the foundation of the meal. The second largest component should be vegetables and fruits.

Maintaining Calories While Reducing Fat

Most Americans are familiar with calories. In fact, counting calories is something many of us do routinely as we try to maintain a healthy weight. But what exactly is a calorie? One dictionary defines the word this way: *a unit used for measuring the energy produced by food when oxidized in the body.*

What's important to know about calories?

1) Different foods provide different amounts of energy.

For example, 1 gram of protein has 4 calories. So does 1 gram of carbohydrate. In contrast, 1 gram of fat has 9 calories, making fat a more concentrated source of calories.

It can be a challenge to get the appropriate amount of calories for our age, size, and activity level — and get those calories from a variety of nourishing foods without too much fat. But this is one of the health recommendations of the Dietary Guidelines for Americans.

Thanks to the nutrition information that's now available on many food labels, we can know at a glance how many calories a serving of a particular item will give us. We can also see what percentage of those calories come from fat.

2) Adequate calories are important to children's health. Calorie levels are now part of school meal requirements for breakfast and lunch.



While many adults worry about getting too many calories, menu planners need to be careful to make sure children *get enough* calories. This is why the *School Meals Initiative for Healthy Children* sets specific calorie goals for breakfast as well as lunch.

Children and teens are growing rapidly. They need plenty of energy — not only for physical activity, but for proper growth and development as well. Their calorie and nutrient needs are determined not only by age and activity but also by size.

Between the ages of 2 and 9 years, a typical child will gain about 4 to 5 pounds per year. The average teenage boy will have his greatest growth from ages 12 through 16 years, during which time he may add approximately 12 inches in height and 50 to 60 pounds in weight. A teenager participating in a competitive sport needs more than 3,000 calories per day.

3) There is a substantial increase in nutrient and calorie needs of children between the ages of 10 and 11 years old.

As a result, students in Grades 7-12 *will not* have their calorie and nutrient needs met by menus planned for Grades K-6. This is very important to keep in mind as you select age and grade groups and plan meals to reflect the structure of your school(s).

4) As we make an effort to meet the Dietary Guidelines, we must replace the calories lost from reducing fat with calories from foods that are lower in fat, especially grain products, vegetables, and fruits.

Each of the newer, alternative menu planning systems — Enhanced Food-Based, Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP) — have built-in methods to ensure that calorie needs for energy and growth are met as fat and saturated fat are reduced.

The Enhanced Food-Based Menu Planning system requires increased amounts of grains, vegetables, and fruits.

NSMP and Assisted NSMP require meeting specific age-related calorie goals as measured through the menu nutrient analysis.

The Traditional Food-Based Menu Planning system does not have any built-in features to accomplish this goal. As a result, schools selecting the Traditional meal pattern must be careful to replace the calories lost from reducing total fat.

CHAPTER 2

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

Food-Based Menu Planning: Traditional and Enhanced



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Food-Based Menu Planning: Traditional and Enhanced

In this chapter, we'll take a closer look at Food-Based Menu Planning — Traditional and Enhanced. As we'll do in Chapter 3 for Nutrient-Based Menu Planning, we will look at the following areas:



- Nutrition Goals
- Nutrient Standards and Age/Grade Groups
- Criteria for a Reimbursable Meal
- Meal Structure for Lunch
- Meal Structure for Breakfast
- Offer versus Serve for Lunch
- Offer versus Serve for Breakfast
- Standardized Recipes
- Processed Foods
- Production Records
- Child Nutrition Labeling

For easy reference, these features are summarized in the chart in Appendix 1. Appendix 2 summarizes these features for Nutrient-Based Menu Planning: Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP).

The Traditional and Enhanced plans share the same nutrition goals, but they have different age/grade groups. They also have different meal structures for lunch. You will notice other similarities and differences, too.

First, an overview:

Food-Based Menu Planning systems use meal patterns and age/grade groups as planning tools. As we saw in Chapter 1, both Traditional and Enhanced Food-Based Menu Planning require specific food group components be served in specific amounts.

Both use meal patterns that are designed to provide over time: 1/3 of the Recommended Dietary Allowances (RDA) for key nutrients for a specific age/grade group for lunch; and 1/4 of the RDA for key nutrients for breakfast. However, the meal pattern for Enhanced Food-Based Menu Planning goes beyond the Traditional meal pattern in significant ways.

In addition to providing 1/3 of RDA for lunch and 1/4 of RDA for breakfast, the Enhanced Food-Based pattern is designed to:

- provide 1/3 of the *calories* needed for specific age/grade groups for lunch
- provide 1/4 of the *calories* needed for specific age/grade groups for breakfast
- help ensure consistency with the Dietary Guidelines

What does this mean for you in practical terms?

If you select Enhanced Food-Based Menu Planning instead of the Traditional approach, you may have an easier time meeting the nutrition goals outlined in Chapter 1 because the meal patterns for this system have been designed specifically with the nutrition goals in mind.

While you may be able to meet the nutrition goals with Traditional Food-Based Menu Planning, you will need to be extra careful to reach the target goals for key nutrients and calories as well as the recommended levels for fat and saturated fat.

Serving plenty of grains, vegetables, and fruits will be important. So will using lower fat versions of products and preparing foods in ways that get rid of excess fat, such as draining cooked meats and using skinless chicken parts, where possible. You will find a variety of tips like these in Chapters 4 and 6.

In Appendix 3, you will also find helpful information on the 1995 quantity recipes contained in USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials,* which has been distributed to schools nationwide. These recipes were prepared specifically with the Dietary Guidelines in mind, and each recipe includes a nutrient analysis. These recipes can be used easily with Traditional or Enhanced Menu Planning or with NSMP and Assisted NSMP.

1. Nutrition Goals

- **What are the nutrition goals for Food-Based Menu Planning? How will your menus be monitored for compliance with them?**

For both Traditional and Enhanced Food-Based Menu Planning, the chart in Appendix 1 states:

> *Menus must meet nutrition goals when averaged over a school week and analyzed by the state agency during a state nutrition review.*

In other words, your objective is the same for *both* Traditional and Enhanced Food-Based systems — to plan menus that meet the nutrition goals when averaged over a school week for:

- Recommended Dietary Allowances (RDA) for key nutrients
- Calories
- Dietary Guidelines

This is the same objective as for NSMP and Assisted NSMP.

- **To accomplish this objective, will you need to do a nutrient analysis of menus with Food-Based Planning?**

No. You are *not required* to do a nutrient analysis of the menu for either Traditional or Enhanced Food-Based Menu Planning.

An analysis will be done by your state agency at the time of the state review. The state will check to see if menus are on track for key nutrients, calories, and the Dietary Guidelines recommendations on fat and saturated fat. During this nutrition assessment, the state agency will need to see production records, nutrient data (such as from manufacturers), and recipes used.

This means that you are not required to use computer hardware or nutrient analysis software. However, you may want to do an analysis — perhaps a computer analysis — for planning purposes and to assess your progress.

To summarize:

1) **Each meal planned with either the Traditional or Enhanced system must do *both* of the following:**

   First, it must provide the required number of food components and food items.

   Second, it must meet the nutrient standards for the age/grade group you are serving.

2) **While the four food *components* for lunch are the same for both Traditional and Enhanced systems....**

   - **Meat/Meat Alternates**
   - **Grains/Breads**
   - **Vegetables/Fruits**
   - **Milk**

   ... there are different meal *patterns* for the two systems.

3) **And, because the Enhanced patterns were designed as part of the *School Meals Initiative for Healthy Children,* they provide required foods in proper portion sizes to meet the nutrition goals.**

2. Nutrient Standards and Age/Grade Groups

■ **What are nutrient standards and what is their purpose? How do they relate to age/grade groups?**

The nutrient standards are an important part of USDA's *School Meals Initiative for Healthy Children.* They were established for all of the menu planning systems by studying the nutritional needs of groups of children of different ages. What exactly are they? Nutrient standards are the required minimum levels of calories and key nutrients to meet the nutrition goals for specific age or grade groups of children for breakfast and lunch menus.

The charts on pages 23 through 26 show the nutrient standards for several age/grade groups — first for lunch, then for breakfast. In each case, the charts show *school week averages* for:

- Calories — also called "Energy Allowances."
- Five key nutrients — protein, calcium, iron, vitamin A, and vitamin C.
- Total fat — not to exceed 30 percent of calories over a school week.
- Saturated fat — to be less than 10 percent of calories over a school week.

Note that for both total fat and saturated fat, the grams of fat will vary depending on actual level of calories. Also keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.

If You Are Planning LUNCH with the TRADITIONAL Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-3	Grades 4-12	Grades 7-12 Optional
Energy Allowances (Calories = cal.)	517 cal.	633 cal.	785 cal.	825 cal.
Protein (grams = g)	7 g	9 g	15 g	16 g
Calcium (milligrams = mg)	267 mg	267 mg	370 mg	400 mg
Iron (milligrams = mg)	3.3 mg	3.3 mg	4.2 mg	4.5 mg
Vitamin A (Retinol Equivalents = RE)	150 RE	200 RE	285 RE	300 RE
Vitamin C (milligrams = mg)	14 mg	15 mg	17 mg	18 mg
Total fat	**No more than 30 percent of total calories should come from fat.**			
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**			

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

If You Are Planning LUNCH with the ENHANCED Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-6	Grades 7-12	Grades K-3 Optional
Energy Allowances (Calories = cal.)	**517 cal.**	**664 cal.**	**825 cal.**	**633 cal.**
Protein (grams = g)	**7 g**	**10 g**	**16 g**	**9 g**
Calcium (milligrams = mg)	**267 mg**	**286 mg**	**400 mg**	**267 mg**
Iron (milligrams = mg)	**3.3 mg**	**3.5 mg**	**4.5 mg**	**3.3 mg**
Vitamin A (Retinol Equivalents = RE)	**150 RE**	**224 RE**	**300 RE**	**200 RE**
Vitamin C (milligrams = mg)	**14 mg**	**15 mg**	**18 mg**	**15 mg**
Total fat	**No more than 30 percent of total calories should come from fat.**			
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**			

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

If You Are Planning BREAKFAST with the TRADITIONAL Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-12
Energy Allowances (Calories = cal.)	**388 cal.**	**554 cal.**
Protein (grams = g)	**5 g**	**10 g**
Calcium (milligrams = mg)	**200 mg**	**257 mg**
Iron (milligrams = mg)	**2.5 mg**	**3.0 mg**
Vitamin A (Retinol Equivalents = RE)	**113 RE**	**197 RE**
Vitamin C (milligrams = mg)	**11 mg**	**13 mg**
Total fat	**No more than 30 percent of total calories should come from fat.**	
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**	

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

If You Are Planning BREAKFAST with the ENHANCED Meal Pattern, the Required Nutrient Standards* Are...

Age/Grade Group:	Preschool	Grades K-12	Grades 7-12 Optional
Energy Allowances (Calories = cal.)	**388 cal.**	**554 cal.**	**618 cal.**
Protein (grams = g)	**5 g**	**10 g**	**12 g**
Calcium (milligrams = mg)	**200 mg**	**257 mg**	**300 mg**
Iron (milligrams = mg)	**2.5 mg**	**3.0 mg**	**3.4 mg**
Vitamin A (Retinol Equivalents = RE)	**113 RE**	**197 RE**	**225 RE**
Vitamin C (milligrams = mg)	**11 mg**	**13 mg**	**14 mg**
Total fat	**No more than 30 percent of total calories should come from fat.**		
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**		

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

***NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.



■ **What are meal patterns? How do they relate to age/grade groups?**

An important step in Food-Based Menu Planning is determining the age/grade group or groups you will be serving and selecting the correct meal pattern(s). A meal pattern is the set of food components and food items and minimum quantities required for a reimbursable meal (lunch or breakfast) for a specific age/grade group.

The age/grade groups are designed to reflect the differing needs of younger and older children while also accommodating the grade structure of the majority of schools. Since not all schools will fall into these grade groups, some schools will need to use more than one grade group.

■ **How many age/grade groups are there for Traditional and Enhanced menu planning? What are they? And how do they differ?**

For school-age students (Grades K-12), both Traditional and Enhanced Food-Based Menu Planning systems use two established age/grade groups for lunch and one established age/grade group for breakfast. However, while there are the same number of age/grade groups for both plans for lunch, the grades are grouped differently.

Similarly, while both Traditional and Enhanced systems offer an additional *optional* age/grade group for lunch, these optional groups are not the same. In addition, the Enhanced system offers an optional age/grade group for breakfast as well as lunch.

Meal patterns for both Traditional and Enhanced systems show the *minimum* amounts you must serve in order to meet the requirements for a particular age/grade group.

■ **What about preschool children?**

Meal patterns for both systems include minimum quantities for two preschool age groups: Ages 1-2 years and Ages 3-4 years.

For school-age students (Grades K-12), what age/grade groups are used with TRADITIONAL Menu Planning?

1) For LUNCHES planned with the Traditional Food-Based system:

There are *two established* age/grade groups. One is for Grades K-3. The other is for Grades 4-12. There is also an *optional* recommended third age/grade group, for Grades 7-12.

Does this mean that K-12 schools using the Traditional system MUST use at least two age/grade groups every day?

USDA *requires* that schools meet the minimum amounts specified in the meal pattern for the appropriate age/grade group. USDA *highly recommends* using at least the two established age/grade groups, as well as the optional third group if possible. This is because the calorie and nutrient needs of children vary by age, gender, size, and activity level.

Some people ask if it is a good idea to streamline planning by using just one age/grade group for all of the children. The answer is no, and here's why: Schools *cannot* use the Grade K-3 pattern for the older children; the food will be insufficent and minimum requirements will not be met.

And, while it is technically *possible* to use the Grade 4-12 pattern for the younger children (since the meal patterns indicate minimum requirements), this is *not* recommended. The food provided by the Grade 4-12 pattern may be excessive for them.

For planning lunches with the Traditional system, it is best to use the two established age/grade groups as well as the recommended (optional) third age/grade group.

2) For BREAKFASTS planned with the Traditional Food-Based system:

Schools serving Grades K-12, must use the *one established* age/grade group. This is for Grades K-12.

For school-age students (Grades K-12), what age/grade groups are used with ENHANCED Menu Planning?

1) For LUNCHES planned with the Enhanced Food-Based system:

Schools serving Grades K-12 use *two established* age/grade groups.

- One is for Grades K-6.
- The other is for Grades 7-12.

There is an additional *optional* age/grade group for Grades K-3. USDA highly recommends using this optional group along with the other two.

2) For BREAKFASTS planned with the Enhanced Food-Based system:

Schools serving Grades K-12 must use at least the *one established* age/grade group. This is for Grades K-12.

They may also use an additional *optional* age/grade group for Grades 7-12. This is recommended to meet the increased nutrient needs of the older children.



3. Criteria for a Reimbursable Meal

■ **With Traditional menu planning, how many food components and food items must a lunch include? How many for breakfast? What about Enhanced menu planning?**

The chart in Appendix 1 uses similar wording here for both Traditional and Enhanced systems. For Traditional Food-Based Menu Planning, it states:

> *Provides the required food components and food items in the correct serving sizes to meet the appropriate Traditional meal pattern.*
>
> - *Four food components for lunch.*
> - *Five food items for lunch.*
> - *Three or four food components for breakfast.*
> - *Four food items for breakfast.*

For Enhanced Food-Based Menu Planning, the wording is the same with the following exception: the word "Enhanced" (instead of "Traditional") comes before "meal pattern."

The wording is different because the two systems use different meal patterns. As we've seen earlier, the patterns for the Enhanced system are newer and have been specifically designed to help schools meet the nutrition goals.

On pages 31 through 51, you will find more information on lunch and breakfast requirements for Food-Based Menu Planning — both Traditional and Enhanced. You will also find answers to questions such as:

- How are food items counted for "crediting" under Traditional and Enhanced systems? Is there a difference?
- Do all foods served in a meal, including condiments, count toward meeting the nutrient standards for the meal?
- What kind of adjustments are needed for school weeks that are longer or shorter than the typical 5 days?

4. Meal Structure for Lunch

- **What are the minimum requirements — by food component and age/grade group — for lunches planned with the Traditional meal pattern? With the Enhanced meal pattern?**

- **What do the meal patterns for the Enhanced system look like? How are they different from the Traditional meal patterns?**

Both Traditional and Enhanced Food-Based Menu Planning systems require certain food components to be served in certain amounts, depending on the age of the students. For both systems, there are *four* food components for lunch — Meat/Meat Alternate, Grains/Breads, Vegetables/Fruits, and Milk.

However, there are significant differences. As we have already seen, while both systems use age/grade groups, they use *different* groups. Equally important, there are also noticeable differences in number of servings and portion sizes.

On the next several pages, we'll go over the meal structure for both systems. First, we'll list the minimum requirements by age/grade group for each approach. Then we'll look at the meal patterns for each. Finally, we'll look at each of the meal components.

With both Traditional and Enhanced meal patterns, there are daily *and* weekly requirements for some food components. For instance, for a lunch planned with the Enhanced system, the requirement for Vegetables/Fruits for Grades K-6 is 3/4 cup per day *plus* an additional 1/2 cup over a week. You will see this on the meal pattern on pages 38 and 39.



For LUNCH with TRADITIONAL FOOD-BASED MENU PLANNING... What are the minimum requirements by food component and age/grade group for school-age (Grades K-12) students?

For the TRADITIONAL system, the chart in Appendix 1 shows the following minimum requirements by age/grade group for each of the four components. You will also find these requirements on the meal pattern on pages 34 and 35.

- **Meat/Meat Alternate**

  For the two established age/grade groups:

  Grades K-3: 1-1/2 oz

  Grades 4-12: 2 oz

  For the recommended (optional) third age/grade group:

  Grades 7-12: 3 oz

- **Grains/Breads**

  For the two established age/grade groups:

  Grades K-3: 8 servings per week; minimum 1 serving per day

  Grades 4-12: 8 servings per week; minimum 1 serving per day

  For the recommended (optional) third age/grade group:

  Grades 7-12: 10 servings per week; minimum 1 serving per day

- **Vegetables/Fruits**

  At least two different fruits and/or vegetables must be offered with every lunch.

  For the two established age/grade groups:

  Grades K-3: 1/2 cup per day

  Grades 4-12: 3/4 cup per day

  For the recommended (optional) third age/grade group:

  Grades 7-12: 3/4 cup per day

- **Milk**

  For all age/grade groups:

  8 oz fluid milk as a beverage

If you select Traditional Food-Based Menu Planning, you will use the lunch meal pattern shown on the following two pages. Here are some things to keep in mind:

1. **The FIVE required food items for a daily lunch are:**
   - One serving of Meat/Meat Alternate
   - One serving of Grains/Breads
   - Two servings of Vegetables (must be two different vegetables), or two servings of Fruits (must be two different fruits), or one of each
   - One serving of Milk

2. **For some components, servings are specified by day. For others, servings are specified on a daily and weekly basis.**

3. **Minimum requirements are shown.**

The meal pattern shows the *minimum* number of servings and portion sizes for each of the required food components for lunches planned with the Traditional system. You may increase portion sizes and add additional foods when needed.

4. **Information is given for several different age/grade groups.**

If your schools serve Grades K-12, it is best to use *at least* the two established age/grade groups. These are for Grades K-3 and Grades 4-12. To go even farther in targeting meals to the ages of the children you serve, you may also use the group shown in the last column. This group — for Grades 7-12 — is *recommended* although not required.

Because some schools serve very young children, the meal pattern also shows minimum quantities for children 1- to 2-years-old and preschoolers (children older than 2 years). USDA has not set nutrient standards for the 1- to 2-year-old group.

See pages 40 through 44 for more information on food components for lunch, including information on two "alternate" foods that may count as part of the Meat/Meat Alternate.

See Appendix 4 for more information on meeting the Grains/Breads requirement.

MEAL PATTERN FOR LUNCH — TRADITIONAL FOOD-BASED MENU PLANNING

• MEAT OR MEAT ALTERNATE:

Per day serve one of the following food items or a combination of these items to provide at least the quantity listed. The quantities shown are the *edible* portion as served.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
Lean meat, poultry, or fish	1 oz	1-1/2 oz	1-1/2 oz	2 oz	3 oz
Cheese	1 oz	1-1/2 oz	1-1/2 oz	2 oz	3 oz
Large egg	1/2	3/4	3/4	1	1-1/2
Cooked dry beans or peas	1/4 cup	3/8 cup	3/8 cup	1/2 cup	3/4 cup
Peanut butter or other nut or seed butters	2 Tbsp	3 Tbsp	3 Tbsp	4 Tbsp	6 Tbsp
Yogurt	4 oz or 1/2 cup	6 oz or 3/4 cup	6 oz or 3/4 cup	8 oz or 1 cup	12 oz or 1-1/2 cup

The following foods may be used to meet *part* of the Meat/Meat Alternate as explained below.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
Peanuts, soy nuts, tree nuts, or seeds**	1/2 oz = 50 %	3/4 oz = 50%	3/4 oz = 50%	1 oz = 50%	1-1/2 oz = 50%

Explanation: ** These foods may be used to meet *no more than* 50% of this requirement. In addition, they must be used *in combination* with one or more of the other meat/meat alternates listed above.

* ***Grades 7-12:*** **This is an optional age/grade group. USDA recommends using it along with the others.**

• GRAINS/BREADS:

Must be enriched or whole grain or contain germ or bran.

A serving is...

A slice of bread or an equivalent serving of biscuits, rolls, etc.,

OR 1/2 cup of cooked rice, macaroni, noodles, other pasta products, or cereal grains.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
Minimum per WEEK:	5 serv	8 serv	8 serv	8 serv	10 serv
Minimum per DAY:	1/2 serv	1 serv	1 serv	1 serv	1 serv

• VEGETABLES/FRUITS:

At least two different vegetables and/or fruits must be offered.
Minimum requirements per day...

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
	1/2 c	1/2 c	1/2 c	3/4 c	3/4 c

• MILK (Fluid):

Must be served as a beverage.

	Ages 1-2 yrs	Ages 3-4 yrs	Grades K-3	Grades 4-12	Grades 7-12*
Per day:	6 fl oz	6 fl oz	8 fl oz	8 fl oz	8 fl oz

* *Grades 7-12:* This is an optional additional age/grade group. USDA recommends using it along with the others.

For LUNCH with ENHANCED FOOD-BASED MENU PLANNING... What are the minimum requirements by food component and age/grade group for school-age (Grades K-12) students?

For the ENHANCED system, the chart in Appendix 1 shows the following minimum requirements for each of the four components. You will also find these on the meal pattern on pages 38 and 39.

- **Meat/Meat Alternate**

  For the two established age/grade groups:

  Grades K-6: 2 oz

  Grades 7-12: 2 oz

  For the optional third age/grade group:

  Grades K-3: 1-1/2 oz

- **Grains/Breads**

  For the two established age/grade groups:

  Grades K-6: 12 servings per week; minimum 1 serving per day

  Grades 7-12: 15 servings per week; minimum 1 serving per day

  For the optional third age/grade group:

  Grades K-3: 10 servings per week; minimum 1 serving per day

- **Vegetables/Fruits**

  At least two different fruits and/or vegetables must be offered with every lunch.

  For the two established age/grade groups:

  Grades K-6: 3/4 cup per day plus additional 1/2 cup per week

  Grades 7-12: 1 cup per day

  For the optional third age/grade group:

  Grades K-3: 3/4 cup per day

- **Milk**

  For all age/grade groups:

  8 oz fluid milk as a beverage

If you select Enhanced Food-Based Menu Planning, you will use the lunch meal pattern shown on the following two pages. Here are some things to keep in mind:

1. **The FIVE required food items for a daily lunch are:**
   - One serving of Meat/Meat Alternate
   - One serving of Grains/Breads
   - Two servings of Vegetables (must be two different vegetables), OR two servings of Fruits (must be two different fruits), OR one serving of each
   - One serving of Milk

2. **For some components, servings are specified by day. For others, servings are specified on a daily *and* weekly basis.**

3. **Minimum requirements are shown.**

The meal pattern shows the *minimum* number of servings and portion sizes for each of the required food components for lunches planned with the Enhanced system.

4. **Information is given for several different age/grade groups. The two established grade groups for the Enhanced lunch pattern are Grades K-6 and 7-12.**

If your schools serve Grades K-12, you must use at least the *two* established age/grade groups shown in columns 3 and 4 — these are for Grades K-6 and Grades 7-12. To go even farther in targeting meals to the ages of the children you serve, you may also use the optional third group shown in column 5 — for Grades K-3.

Because some schools serve very young children, the meal pattern also shows minimum quantities for children 1- to 2-years-old and preschoolers (children older than 2 years). USDA has not set nutrient standards for the 1- to 2-year-old group.

5. **For the purposes of this chart, a week equals 5 days.**

As you plan meals, you will need to incorporate weekly minimum servings of certain food items in addition to minimum daily servings. The meal pattern is based on a week of 5 consecutive days. If you are planning menus for a school week that is longer or shorter than 5 days, you will need to adjust accordingly. (See note in Grains/Breads section of the meal pattern.)

For programs that serve meals for more than 5 days per week or less than 5 days per week, the additional or reduced quantities should be prorated over the actual number of serving days.

See pages 40 through 44 for more information on food components for lunch, including information on two "alternate" foods that may count as part of the Meat/Meat Alternate.

See Appendix 4 for more information on meeting the Grains/Breads requirement.

MEAL PATTERN FOR LUNCH — ENHANCED FOOD-BASED MENU PLANNING

• MEAT OR MEAT ALTERNATE:

Per day serve one of the following food items or a combination of these items to provide at least the quantity listed. The quantities shown are the *edible* portion as served.

	Ages 1-2 yrs	Pre-school	Grades K-6	Grades 7-12	Grades K-3*
Lean meat, poultry, or fish	1 oz	1-1/2 oz	2 oz	2 oz	1-1/2 oz
Cheese	1 oz	1-1/2 oz	2 oz	2 oz	1-1/2 oz
Large egg	1/2	3/4	1	1	3/4
Cooked dry beans or peas	1/4 cup	3/8 cup	1/2 cup	1/2 cup	3/8 cup
Peanut butter or other nut or seed butters	2 Tbsp	3 Tbsp	4 Tbsp	4 Tbsp	3 Tbsp
Yogurt	4 oz or 1/2 cup	6 oz or 3/4 cup	8 oz or 1 cup	8 oz or 1 cup	6 oz or 3/4 cup

The following foods may be used to meet *part* of the Meat/Meat Alternate as explained below.

	Ages 1-2 yrs	Pre-school	Grades K-6	Grades 7-12	Grades K-3*
Peanuts, soynuts, tree nuts, or seeds**	1/2 oz= 50%	3/4 oz= 50%	1 oz= 50%	1 oz= 50%	3/4 oz= 50%

** These foods may be used to meet *no more than* 50% of this requirement. In addition, they must be used *in combination* with one or more of the other meat/meat alternates listed above.

* ***Grades K-3:*** **This is an optional age/grade group. USDA recommends using it along with the others.**

• GRAINS/BREADS:

Must be enriched or whole grain or contain germ or bran.

A serving is...

A slice of bread or an equivalent serving of biscuits, rolls, etc.,

OR 1/2 cup of cooked rice, macaroni, noodles, other pasta products, or cereal grains.

Up to one serving per day may be a grain-based dessert. (This applies only to Grades K-12, not to Ages 1-2 and Preschool.)

	Ages 1-2 yrs	Pre-school	Grades K-6	Grades 7-12	Grades K-3*
Minimum per WEEK:	5 serv	8 serv	12 serv	15 serv	10 serv
Minimum per DAY:	1/2 serv	1 serv	1 serv	1 serv	1 serv

In this chart, a week equals 5 days. If there are 7 days in the week, increase servings of Grains/Breads per week by:

— 5 servings for Grades K-6 to a total of 17 servings
— 6 servings for Grades 7-12 to a total of 21 servings

If the week has 3 days, decrease servings per week by:

— 5 servings for Grades K-6 to a total of 7 servings
— 6 servings for Grades 7-12 to a total of 9 servings

Increasing the number of servings of Grains/Breads is critical to the success of meeting the calorie requirements and implementing the Dietary Guidelines recommendations for dietary fiber.

• VEGETABLES/FRUITS:

At least two different vegetables and/or fruits must be offered.
Minimum requirements per day:

Ages 1-2 yrs	Pre-school	Grades K-6	Grades 7-12	Grades K-3*
1/2 c	1/2 c	3/4 c**	1 c	3/4 c
		** plus an extra 1/2 cup over a week		

• MILK (Fluid):

Must be served as a beverage.

	Ages 1-2 yrs	Pre-school	Grades K-6	Grades 7-12	Grades K-3*
Per day:	6 fl oz	6 fl oz	8 fl oz	8 fl oz	8 fl oz

* ***Grades K-3:*** **This is an optional age/grade group. USDA recommends using it along with the others.**

More Information on Food Components for Lunch

The meal patterns on pages 33 through 39 show you what lunch looks like — first with Traditional Menu Planning, then with Enhanced. Here are more specifics on what is required for each of the four food components.

The requirements outlined here are the same for both Traditional and Enhanced systems. They are *not* about quantities, except for a few instances where minimum serving sizes are given. For information on required quantities — which are different for the Traditional and Enhanced systems — see the meal patterns.

Lunch - Meat/Meat Alternate Requirements:

- The serving of Meat/Meat Alternate may be contained only in the main dish plus one other menu item.
- Dry beans and peas may count as a Vegetable or as a Meat Alternate, but not as both in the same meal.
- A serving of cooked meat is lean meat without the bone.
- A serving of cooked fresh or frozen chicken or turkey includes meat and skin as normally served.
- Two "alternate" foods may count as part of the Meat/Meat Alternate as long as they are used according to USDA directions. These foods are: *vegetable protein products* and *enriched macaroni products with fortified protein*.

Lunch - Grains/Breads Requirements:

- Provide the required number of servings per day and per week.
- The minimum allowable serving size that may count toward meeting the required serving is 1/4 of a serving.
- The item must be whole-grain or enriched or made from whole-grain or enriched meal or flour, or bran or germ; or if it is a cereal, the product must be whole-grain, enriched, or fortified.
- If it is enriched, the item must meet the U.S. Food and Drug Administration's Standards of Identity for enriched bread, macaroni and noodle products, rice, or cornmeal.

What foods qualify as Grains/Breads for lunch?



To qualify as Grains/Breads for school lunches, foods must be enriched or whole-grain or made from enriched or whole-grain meal or flour. Bran and germ are credited the same as enriched or whole-grain meal or flour. Such foods include, but are not limited to:

- *Breads* that are enriched or whole-grain.
- *Biscuits, bagels, rolls, tortillas, muffins, or crackers* made with enriched or whole-grain meal or flour.
- *Cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat or couscous* that are enriched, whole-grain, or fortified.
- *Ready-to-eat breakfast cereals* that are enriched, whole-grain, or fortified.
- *Cereals or bread products that are used as an ingredient in another menu item* such as crispy rice treats, oatmeal cookies, or breading on fish or poultry when they are enriched, whole-grain, or fortified.
- *Macaroni or noodle products (cooked)* made with enriched or whole-grain flour. Macaroni products that have been fortified with protein may be counted to meet either a Grains/Breads or Meat/Meat Alternate requirement for lunch but not for both in the same meal.
- *Sweet foods such as toaster pastries, coffee cake, doughnuts, sweet rolls, cookies, cakes or formulated grain-fruit products* when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A shown in Appendix 4.
- *Pie crust* when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A in Appendix 4.
- *Non-sweet snack products such as hard pretzels, hard bread sticks, and chips* made from enriched or whole-grain meal or flour.

For additional information on the criteria for determining acceptable Grains/Breads and the minimum weight of a serving, see Appendix 4.

Lunch - Vegetables/Fruits Requirements:

- At least two different vegetables and/or fruits must be offered.
- Full-strength vegetable or fruit juice may be used to meet no more than 1/2 of the total requirement for lunch for Vegetables/Fruits.
- Fruit and vegetable concentrates can be used in either diluted or concentrated form.
- Dry beans and peas may count as a Vegetable or as a Meat Alternate, but not as both in the same meal.
- A serving of canned fruit may include the juice or syrup in which the fruit is packed unless otherwise indicated in USDA's *Food Buying Guide for Child Nutrition Programs.*
- A serving of thawed frozen fruit is the fruit plus the juice that accumulated during thawing.
- 1/8 cup of a vegetable or fruit is the minimum serving size which can be: (a) counted toward the required total servings and (b) counted as one of the two different Vegetables/Fruits.

Lunch - Milk Requirements:

- Provide one serving.
- Section 107 of Public Law 103-448 modified the statutory requirement to offer fluid whole milk and fluid unflavored lowfat milk for lunch. Schools are now required to offer a variety of fluid milk consistent with children's preferences in the prior year. Records of the past year's purchase orders will serve as a guide to what variety of milk should be offered.
- If a specific type of milk represents less than 1 percent of the total amount of milk consumed in the previous year, the school may elect not to offer that type of milk for lunch.

Counting food items for lunch...

What food items can be counted as meeting meal pattern requirements for lunch with Food-Based Menu Planning?



In the Child Nutrition Programs, the word "credit" is used to acknowledge that a particular food meets the requirements of one of the four required food components.

Only items which contain foods that can be *credited* as one of the five food items for lunch can be counted as meeting the meal pattern requirements.

For example, a typical chocolate pudding would *not* count as one of the food items for lunch. It does not contain a food that can be credited as one of the five food items. Although chocolate pudding may contain milk, the milk requirement can only be met by serving fluid milk as a beverage.

Under Enhanced Menu Planning, a chocolate <u>bread</u> pudding MAY count as a grain-based dessert if it contains the required amount of bread to qualify for a serving of Grains/Breads. In contrast, with the Traditional Food-Based system, the chocolate bread pudding served as dessert would <u>not</u> count toward the Grains/Bread requirement.

For more information on crediting of foods, see the Grains/Breads Instruction in Appendix 4. Also see USDA's *Food Buying Guide for Child Nutrition Programs.*

5. Meal Structure for Breakfast

■ **What are the minimum requirements for breakfast? Is the meal structure the same for both the Traditional and Enhanced systems? What does the breakfast meal pattern look like?**

The chart in Appendix 1 shows *no* difference in the meal structure for breakfasts planned with the Traditional and Enhanced systems. However, there is one difference in age/grade groups used — with the Enhanced system, there is an *optional* second age/grade group for Grades 7-12.

For breakfast with both the Traditional and Enhanced systems, Appendix 1 shows the following servings for school-age students (Grades K-12):

- **Meat/Meat Alternate AND/OR Grains/Breads**

  For the one established age/grade group...

  Grades K-12: Two servings of Meat/Meat Alternate OR two servings of Grains/Breads OR one serving of each

- **Juice/Fruit/Vegetable**

  For the one established age/grade group...

  Grades K-12: 1/2 cup

- **Milk**

  For all age/grade groups:

  8 oz fluid milk as a beverage OR on cereal OR both

If you are using the optional extra age/grade group for the Enhanced system (Grades 7-12), you will need to serve one additional serving of Grains/Breads.

If you select Food-Based Menu Planning — Traditional or Enhanced — you will use the breakfast meal pattern shown on pages 46 and 47. Here are some things to keep in mind:

1. The FOUR required food items for a daily breakfast are:

- Two servings of Grains/Breads or two servings of Meat/Meat Alternate or one serving of each
- One serving of Milk
- One serving of Juice/Fruit/Vegetable

2. The number of food items for breakfast is a *daily* criteria.

The meal pattern specifies a minimum number and size of servings *per day* for each food item required.

3. Minimum requirements are shown.

The meal pattern shows the *minimum* number of servings and portion sizes for each of the required food components.

4. Information is given for several different age/grade groups.

As you can see, information is given for several different age/grade groups. Schools serving K-12 must use at least the one established age/grade group shown in column 3 — this is for Grades K-12. In addition, to better target the needs of children, K-12 schools using the Enhanced system may *also* use the optional group shown in column 4 — for Grades 7-12.

Because some schools serve very young children, the meal pattern also shows minimum quantities for preschoolers as well as for children 1- to 2-years-old. USDA has not set nutrient standards for the 1- to 2-year-old group.

See pages 48 through 51 for more information on food components for breakfast.

See Appendix 4 for more information on meeting the Grains/Breads requirement.

MEAL PATTERN FOR BREAKFAST — TRADITIONAL or ENHANCED FOOD-BASED MENU PLANNING

• GRAINS/BREADS - and/or - MEAT/MEAT ALTERNATES:

Select ONE serving from EACH of these components to equal:

one GRAINS/BREADS
- and -
one MEAT/MEAT ALTERNATE

OR select TWO servings from ONE of these components to equal:

two GRAINS/BREADS
- or -
two MEAT/MEAT ALTERNATES

- **If you are using the optional extra age/grade group for the Enhanced system (Grades 7-12), serve one additional serving of Grains/Breads.**

GRAINS/BREADS:

You can serve one of the following food items or combine them to meet the requirements.

	Ages 1-2 yrs	Pre-school	Grades K-12	Grades 7-12*
(a) Whole-grain or enriched bread	1/2 serv	1/2 serv	1 serv	1 serv
(b) Whole-grain or enriched biscuit, roll, muffin, etc.	1/2 serv	1/2 serv	1 serv	1 serv
(c) Whole-grain, enriched, or fortified cereal	1/4 c or 1/3 oz	1/3 c or 1/2 oz	3/4 c or 1 oz	3/4 c or 1 oz

*** Optional extra age/grade group for the Enhanced system. Recommended but not required.**

MEAT/MEAT ALTERNATE:

You can serve one of the following food items or combine them to meet the requirements.

	Ages 1-2 yrs	Pre-school	Grades K-12	Grades 7-12*
Meat, poultry, or fish	1/2 oz	1/2 oz	1 oz	1 oz
Cheese	1/2 oz	1/2 oz	1 oz	1 oz
Egg (large)	1/2 egg	1/2 egg	1/2 egg	1/2 egg
Peanut butter or other nut or seed butters	1 Tbsp	1 Tbsp	2 Tbsp	2 Tbsp
Cooked dry beans or peas	2 Tbsp	2 Tbsp	4 Tbsp	4 Tbsp
Yogurt	2 oz or 1/4 cup	2 oz or 1/4 cup	4 oz or 1/2 cup	4 oz or 1/2 cup
Nuts and/or seeds (see note below)**	1/2 oz	1/2 oz	1 oz	1 oz

** No more than 1 oz of nuts and/or seeds may be served in any one meal.

• MILK (Fluid):

As a beverage or on cereal, or both.

Ages 1-2 yrs	Pre-school	Grades K-12	Grades 7-12*
1/2 cup	3/4 cup	8 fl oz	8 fl oz

• JUICE/FRUIT/VEGETABLE:

Include a minimum of one serving. You can serve a fruit or vegetable or both; or full-strength fruit or vegetable juice.

Ages 1-2 yrs	Pre-school	Grades K-12	Grades 7-12*
1/4 cup	1/2 cup	1/2 cup	1/2 cup

*** Optional extra age/grade group for the Enhanced system. Recommended but not required.**

More Information on Food Components for Breakfast

By studying the meal pattern on pages 46 and 47, you can get a good idea of what a breakfast must include. However, you will also need to know the following:

Breakfast - Grains/Breads Requirements:

The meal pattern for a breakfast calls for a minimum of two servings of Grains/Breads OR two servings of Meat/Meat Alternate, OR one serving of each.

For Grains/Breads:

- The item must be whole-grain or enriched or made from whole-grain or enriched meal or flour, or bran or germ; or if it is a cereal, the product must be whole-grain, enriched, or fortified.
- If it is enriched, the item must meet the U.S. Food and Drug Administration's Standards of Identity for enriched bread, macaroni and noodle products, rice, or cornmeal.
- The minimum allowable serving size that can count toward meeting the required serving is 1/4 of a serving.

It is important to note that Grains/Breads components must either: (1) meet the quantities specified in USDA's Grains/Breads Instruction; or (2) provide the minimum required quantity of enriched flour/whole grain in each serving. (See Appendix 4.)



Shown here is Granola from USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials.* The tool kit includes many exciting breakfast and lunch recipes. See Appendix 3 for more information.

What foods qualify as Grains/Breads for breakfast?

To qualify as Grains/Breads for school breakfasts, foods must be enriched or whole-grain or made from enriched or whole-grain meal or flour. Bran and germ are credited the same as enriched or whole-grain meal or flour. Such foods include, but are not limited to:

- *Breads* that are enriched or whole-grain.
- *Biscuits, bagels, rolls, tortillas, muffins, or crackers* made with enriched or whole-grain meal or flour.
- *Cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat or couscous* that are enriched, whole-grain, or fortified.
- *Ready-to-eat breakfast cereals* that are enriched, whole-grain, or fortified.
- *Cereals or bread products that are used as an ingredient in another menu item* such as crispy rice treats, oatmeal muffins, or breading on French toast sticks when they are enriched, whole-grain, or fortified.
- *Macaroni or noodle products (cooked)* made with enriched or whole-grain flour.
- *Sweet foods such as toaster pastries, coffee cake, doughnuts, sweet rolls, cookies, cakes or formulated grain-fruit products* when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A shown in Appendix 4.
- *Pie crust* when made with enriched or whole-grain meal or flour and served as permitted under Exhibit A shown in Appendix 4.
- *Non-sweet snack products such as hard pretzels, hard bread sticks, and chips* made from enriched or whole-grain meal or flour.

For additional information on the criteria for determining acceptable Grains/Breads and the minimum weight of a serving, see Appendix 4.

Breakfast - Meat/Meat Alternate Requirements:

The meal pattern calls for a minimum of two servings of Meat/Meat Alternate OR two servings of Grains/Breads OR one of each.

For Meat/Meat Alternate:

- No more than 1 ounce of nuts and/or seeds may be credited in any one meal.
- Dry beans and peas used in items such as a breakfast burrito may count as a Vegetable or Meat Alternate but not as both in the same meal.

Breakfast - Juice/Fruit/Vegetable Requirements:

The meal pattern calls for a minimum of one serving.

- The minimum amount that can count toward meeting the total required servings is 1/8 cup.
- If juice is served to meet the total requirement, it must be full-strength.
- Dry beans and peas used in an item such as a breakfast burrito may count as a Vegetable or as a Meat Alternate, but not as both in the same meal.
- A serving of canned fruit may include the juice or syrup in which the fruit is packed unless otherwise indicated in USDA's *Food Buying Guide for Child Nutrition Programs.*
- A serving of thawed frozen fruit is fruit plus the juice that accumulated during thawing.

NOTE: For lunch, full-strength juice can meet only one-half of the Fruit/Vegetable requirement. But for breakfast, full-strength juice can meet the full requirement.



Counting food items for breakfast...

What food items can be counted as meeting meal pattern requirements for breakfast with Food-Based Menu Planning?

As we've seen earlier with lunch, in the Child Nutrition Programs the word "credit" is used to acknowledge that a particular food meets the requirements of one of the required food components. Only items which contain foods that can be *credited* as one of the four food items for breakfast can be counted as meeting the meal pattern requirements.

For example, a cereal bar MAY count as one of the food items for breakfast if it contains the required amount of enriched cereal to qualify for a serving of a ready-to-eat breakfast cereal as a Grains/Breads food item.

A 1/4 serving of Grains/Breads is the minimum amount that may be counted toward the required servings.

For more information on crediting of foods, see the Grains/Breads Instruction in Appendix 4. Also see USDA's *Food Buying Guide for Child Nutrition Programs*.

6. Offer versus Serve for Lunch

- **Have the goals of Offer versus Serve (OVS) changed as a result of the *School Meals Initiative for Healthy Children?* Are OVS regulations the same for Traditional and Enhanced Food-Based Menu Planning?**

Offer versus Serve (OVS) allows students to decline a certain number of food items in the meal. The original goals of OVS were to minimize plate waste and encourage schools to offer more food choices. These goals have not changed.

Similarly, OVS regulations have not changed for meals planned with Food-Based Menu Planning. The regulations are the same for both Traditional and Enhanced systems.

Are all schools required to have Offer versus Serve as part of their lunch programs? No. Only senior high schools are required to have OVS for lunch. Local school food authorities can choose whether or not they want to have OVS for their junior high, middle, and elementary schools. For details on how Offer versus Serve works, see page 53 and Appendix 5.



Does OVS accomplish the goals of reducing plate waste and encouraging more food choices?

Many school food service managers say that students do, in fact, consume more food when they are not required to take the full reimbursable meal. The reason, they say, is simple: students like having choices and they are more likely to eat food items they choose themselves.

Because the meal price is the same whether or not they decline some items, many students realize they get more for their money if they take and eat the full reimbursable meal.

Here's how OVS works for lunch with Food-Based Menu Planning:

- Students must be offered all five required items: one serving each of Meat/Meat Alternate, Milk, Grains/Breads; and two servings of Vegetables/Fruits.
- Students have the option of which item(s) to decline.
- Senior high school students are allowed to decline two of the five required food items.
- Students in junior high, middle, and elementary schools may be permitted to decline one or two of the five required food items. Local school food authorities decide whether their students may decline as many as two items, or only one.
- Students are allowed to take smaller portions of the *declined* food items. The required food items taken by the student, however, must each be a full serving.
- Serving sizes must be at least equal to the minimum required quantities by age or grade group.
- The lunch must be priced as a unit. In other words, a student's decision to decline the allowed number of food items (or to accept smaller portions of otherwise declined food items) does not affect the charge for the meal.
- For an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

For Traditional and Enhanced Food-Based Menu Planning, this information is summarized as follows in Appendix 1:

- *Required for senior high schools.*
- *High school students must take no fewer than three of the required five food items. They get to choose which item(s) to decline.*
- *Optional for lower grades. (School food authorities decide whether to have OVS.)*

Appendix 5 provides additional information on Offer versus Serve with Food-Based Menu Planning, including how to count items for reimbursable meals.

7. Offer versus Serve for Breakfast

■ **What is the goal of OVS for breakfast? How does it work? Are any schools required to have OVS for breakfast?**

The goal of OVS for breakfast is the same as for lunch. However, there are important differences in the way it works. For example, while senior high schools are required to have OVS for their lunch programs, it is optional for breakfast. It is also optional for schools serving younger students.

Here's how it works:

- Students must be offered all four required food items:
  - One serving of Milk
  - One serving of Juice/Fruit/Vegetable
  - Two servings of Meat/Meat Alternate
    OR two servings of Grains/Breads
    OR one serving of each
- The serving sizes must equal the minimum quantities required by age/grade group.
- Students may refuse one food item from any component.
- The breakfast must be priced as a unit. In other words, the charge for the meal is the same whether or not a student chooses to decline a food item.

For an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

For additional information, see Appendix 5.

8. Standardized Recipes

■ **Are standardized recipes recommended for Traditional and Enhanced Food-Based Menu Planning? Where can you get standardized recipes for school meals?**

Standardized recipes are an important management tool in any food service program. They are highly recommended for planning meals with Traditional and Enhanced Food-Based Menu Planning. On a daily basis, they help ensure consistent quality and quantity.

In addition, when state agency representatives analyze menus to check for compliance with the nutrition goals, they will need to know which recipes were used and have copies of those recipes. This is easier when standardized recipes have been used.

Standardized recipes and preparation techniques should be used for all menu items that have two or more ingredients or that require any preparation.

The chart in Appendix 1 states the following for Traditional and Enhanced Food-Based Menu Planning:

- *A record and copy of recipes used must be available during state nutrition review and analysis.*

Sources of standardized recipes include the following. These are listed with additional information in Appendix 3:



- *USDA Quantity Recipes for Schools*
- *A Tool Kit for Healthy School Meals: Recipes and Training Materials*
- *The School Lunch Challenge I, II, and III Recipes*

Shown here are French Toast Strips with Spiced Apple Topping from USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials.*

9. Processed Foods

When planning to use processed foods, such as brand-name products, will you need to have nutrition information? How can you get this information?

In order to plan meals using Food-Based Menu Planning, you will need to know what a particular product contributes to meal pattern requirements. In addition, in order to plan breakfasts and lunches that meet the appropriate nutrient standards, you will want to know what individual foods contribute to a healthful meal. Reading nutrition labels or information sheets from manufacturers is a good way to start. You will need to have this information on hand for the nutrition assessment done by your state agency.

When you are using processed foods, it is especially important to have nutrition information for particular products. This is because similar items can be very different, even if they have the same name. For example, one manufacturer's ravioli may have twice the amount of saturated fat as another's, and there can be other significant differences, too.

Besides reading product labels, how else can you get the information you need? Even if you have chosen to use Traditional or Enhanced Food-Based Menu Planning instead of Nutrient Standard Menu Planning (NSMP) or Assisted NSMP, you may want to obtain a copy of the USDA-approved NSMP software. Built into this software is the Child Nutrition Database (CN Database).

The CN Database contains files that list food items and nutrients. For example, you will find information on:

- Reference foods commonly used by schools
- USDA commodity foods
- USDA quantity recipes for school food service
- Brand-name processed foods used in schools
- USDA's *Food Buying Guide*

These files are "locked" in order to keep them accurate and reliable. This means you can see and use what is in them but cannot add, delete, or alter any information. You can, however, open up and work with the empty files that the software also includes. These allow you to develop a local database of foods you use that are not already in the database.

If you plan to offer a food item but do not find it listed in the CN Database, you can obtain the nutrient analysis from the product's food label or by contacting the manufacturer. You can then enter the information into your local database.

Foods that are included in the reference foods of the CN Database, such as basic condiments, canned vegetables, fruits, etc., can be used without obtaining brand-name analysis.

10. Production Records

■ **Are production records required for Traditional and Enhanced Food-Based Menu Planning?**

The chart in Appendix 1 states:

Program regulations require schools to keep food production and menu records.

Production records are valuable management tools. You will want to keep records of:

- Menus
- Product specifications
- Recipes and preparation methods
- Projected production of menu items
- Number of reimbursable meals served

See Chapter 7 for sample production records.



11. Child Nutrition Labeling

- **Does the Child Nutrition Labeling Program apply to Traditional and Enhanced Food-Based Menu Planning?**

The Child Nutrition (CN) Labeling Program applies to both Traditional and Enhanced Food-Based Menu Planning. This is because CN labels on products show the product's contribution toward meal pattern requirements.

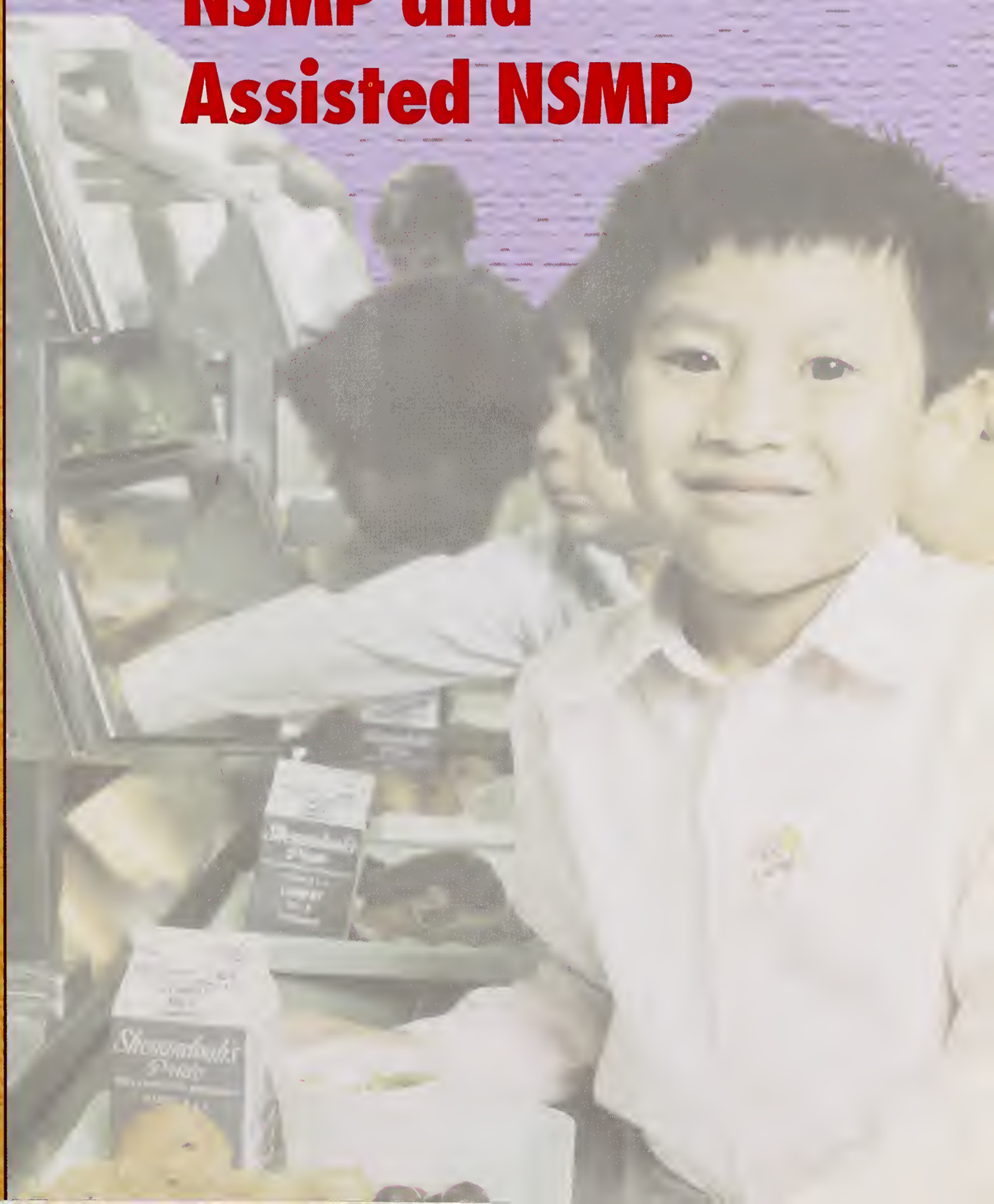
CN Labeling *does not* apply to NSMP or Assisted NSMP because these menu planning systems do not use meal patterns as planning tools. However, CN-labeled products may be served in meals planned with NSMP or Assisted NSMP.

For more information on CN labeling, see Appendix 6.

CHAPTER 3

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

Nutrient-Based Menu Planning: NSMP and Assisted NSMP



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Nutrient-Based Menu Planning: NSMP and Assisted NSMP

In this chapter, we'll take a closer look at Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (Assisted NSMP). As we did in Chapter 2 for Food-Based Menu Planning, we'll look at the following areas:



- Nutrition Goals
- Nutrient Standards and Age/Grade Groups
- Criteria for a Reimbursable Meal
- Meal Structure for Lunch
- Meal Structure for Breakfast
- Offer versus Serve for Lunch
- Offer versus Serve for Breakfast
- Standardized Recipes
- Processed Foods
- Production Records
- Child Nutrition Labeling

For easy reference, these features are summarized in the chart in Appendix 2. Appendix 1 summarizes these features for Food-Based Menu Planning.

Both NSMP and Assisted NSMP use computerized nutrient analysis of menus as planning tools. When averaged over a school week, this menu analysis must meet the nutrient standards for specific age/grade groups.

First, an overview...

As we saw in Chapter 1, NSMP and Assisted NSMP take a Nutrient-Based approach to menu planning. Planning is done with the help of USDA-approved computer software that is specifically programmed to help you put together menus that meet the nutrition goals established by the *School Meals Initiative for Healthy Children.*

With NSMP, you use the computer software to plan menus and do nutrient analysis. With Assisted NSMP, an outside consultant or other agency (such as the state agency or another school district) does the menu planning and nutrient analysis, based on local preferences.

Unlike Food-Based Menu Planning, NSMP and Assisted NSMP do not use meal patterns with required food components and food items. In fact, there are no required foods *except* fluid milk. Instead of *food components,* planners work with *menu and food items.* This will be explained in more detail later.

Many menu planners using Nutrient-Based Menu Planning like the flexibility it gives them in selecting foods and responding to customer preferences. It may be easier, for example, to provide vegetarian and ethnic selections. This flexibility might make planning within a budget easier, too.

In addition, because the nutrient analysis is done before the menu is served, there is immediate feedback on compliance with the nutrition goals. This can be used for marketing healthy school meals as well as planning them.

1. Nutrition Goals

■ **What are the nutrition goals for Nutrient-Based Menu Planning? How will your menus be reviewed for compliance with them?**

Your objective with Nutrient-Based Menu Planning is to plan menus that meet the nutrition goals when averaged over a school week for:

- Recommended Dietary Allowances (RDA) for key nutrients
- Calories
- Dietary Guidelines

Using the USDA-approved computer software, you (or with Assisted NSMP, an outside consultant or agency) plan weekly menus that are measured by nutrient analysis of foods. For review purposes, your state agency will review your nutrient analysis procedure and data entry. This will ensure you are doing nutrient analysis correctly and meeting nutrition goals.

For NSMP and Assisted NSMP, the chart in Appendix 2 states:

> *Menus must meet nutrition goals when averaged over a school week.*
>
> *Requires computerized nutrient analysis of planned menus for: RDA (Recommended Dietary Allowances) for key nutrients; calories; and Dietary Guidelines measures. USDA-approved software must be used for computerized nutrient analysis.*

2. Nutrient Standards and Age/Grade Groups

■ **What are the nutrient standards for NSMP and Assisted NSMP? How do nutrient standards relate to age/grade groups with this approach?**

As we saw in Chapter 1, nutrient standards are the required levels of calories and key nutrients to meet the nutrition goals set by the *School Meals Initiative for Healthy Children.* The nutrient standards for healthy school meals were established for all of the menu planning systems by studying the nutritional needs of groups of children of different ages. There are different nutrient standards for different age/grade groups of children.

What is new with NSMP and Assisted NSMP is *the way you plan meals* to achieve the nutrient standards — and the opportunity to develop customized age groups, if you wish.

How do age/grade groups work with NSMP and Assisted NSMP? Why is there flexibility in targeting meals to children of different ages?

Looking under "Nutrient Standards and Age/Grade Groups" on the chart in Appendix 2, you will see the following for NSMP and Assisted NSMP:

> *Minimum of two established age/grade groups: Grades K-6 and Grades 7-12 (plus optional third group for Grades K-3). There are different nutrient standards for each of these three groups.*
>
> *Optional established age groups and nutrient standards.*
>
> *Optional customized age groups and nutrient standards.*

In other words, you have three ways to approach age/grade groups and nutrient standards with NSMP and Assisted NSMP. The approach you select will depend on the needs of your school and your preferences. The USDA-computer software includes instructions for each approach and has been programmed to allow you to select the one you prefer.







What are the three ways you can approach age/grade groups and nutrient standards?

1) You can choose to plan by *grade* groups. For K-12 schools, you will need to use at least the two established groups for lunch and the one established group for breakfast.

For *lunches* planned with NSMP and Assisted NSMP, the established and optional grade groups are the same as those used with Enhanced Food-Based Menu Planning. In other words:

> For K-12 schools, you will need to use a minimum of two established grade groups. One is for Grades K-6. The other is for Grades 7-12.
>
> If you wish, you can also use a third, optional grade group, which USDA recommends but does not require. This is for Grades K-3.

For *breakfasts* planned with NSMP and Assisted NSMP, there is one established grade group — for Grades K-12. In addition, there is an optional extra grade group — for Grades 7-12. Using this extra group is recommended, but not required.

The charts on pages 65 and 66 show the nutrient standards for lunch and breakfast for these grade groups. As the charts show, there is also a grade group for preschool.

2) You can use a set of *established age* groups.

Instead of using grade groups, you can plan by age group. This approach might be helpful to you if for some reason your school doesn't have traditional grades. There are four established age groups built into the computer software. They are in years:

- Ages 3-6
- Ages 7-10
- Ages 11-13
- Ages 14 and older

The charts on pages 67 and 68 show nutrient standards for lunch and breakfast for these age groups.

3) You can develop your own *customized age* groups. This method allows you to most accurately target the nutrient needs of the children you serve.

Following the instructions in the software, you can develop customized groups to reflect the ages of the children in your school. See page 70 for more information on using customized age groups.

The charts on the next four pages show the minimum requirements for lunches and breakfasts planned with NSMP and Assisted NSMP. In each case, the charts show *school week averages* for:

- Calories — also called "Energy Allowances."
- Five key nutrients — protein, calcium, iron, vitamin A, and vitamin C.
- Total fat — not to exceed 30 percent of calories over a school week.
- Saturated fat — to be less than 10 percent of calories over a school week.

Note that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level. Also keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.



For LUNCHES Planned with NSMP and Assisted NSMP...

If You Are Using Grade Groups, The Nutrient Standards* Are:

Age/Grade Group:	Preschool	Grades K-6	Grades 7-12	Grades K-3 Optional
Energy Allowances (Calories = cal.)	**517 cal.**	**664 cal.**	**825 cal.**	**633 cal.**
Protein (grams = g)	**7 g**	**10 g**	**16 g**	**9 g**
Calcium (milligrams = mg)	**267 mg**	**286 mg**	**400 mg**	**267 mg**
Iron (milligrams = mg)	**3.3 mg**	**3.5 mg**	**4.5 mg**	**3.3 mg**
Vitamin A (Retinol Equivalents = RE)	**150 RE**	**224 RE**	**300 RE**	**200 RE**
Vitamin C (milligrams = mg)	**14 mg**	**15 mg**	**18 mg**	**15 mg**
Total fat	**No more than 30 percent of total calories should come from fat.**			
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**			

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

For BREAKFASTS Planned with NSMP and Assisted NSMP...

If You Are Using Grade Groups, The Nutrient Standards* Are:

Age/Grade Group:	Preschool	Grades K-12	Grades 7-12 Optional
Energy Allowances (Calories = cal.)	**388 cal.**	**554 cal.**	**618 cal.**
Protein (grams = g)	**5 g**	**10 g**	**12 g**
Calcium (milligrams = mg)	**200 mg**	**257 mg**	**300 mg**
Iron (milligrams = mg)	**2.5 mg**	**3.0 mg**	**3.4 mg**
Vitamin A (Retinol Equivalents = RE)	**113 RE**	**197 RE**	**225 RE**
Vitamin C (milligrams = mg)	**11 mg**	**13 mg**	**14 mg**
Total fat	**No more than 30 percent of total calories should come from fat.**		
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**		

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

For LUNCHES Planned with NSMP and Assisted NSMP...

If You Are Using Established Age Groups, The Nutrient Standards* Are:

Age/Grade Group:	Ages 3-6	Ages 7-10	Ages 11-13	Ages 14 and older
Energy Allowances (Calories = cal.)	558 cal.	667 cal.	783 cal.	846 cal.
Protein (grams = g)	7.3 g	9.3 g	15.0 g	16.7 g
Calcium (milligrams = mg)	267 mg	267 mg	400 mg	400 mg
Iron (milligrams = mg)	2.5 mg	2.5 mg	3.4 mg	3.4 mg
Vitamin A (Retinol Equivalents = RE)	158 RE	233 RE	300 RE	300 RE
Vitamin C (milligrams = mg)	14.6 mg	15.0 mg	16.7 mg	19.2 mg
Total fat	**No more than 30 percent of total calories should come from fat.**			
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**			

Remember these important points: (1) This chart shows *minimum school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

For BREAKFASTS Planned with NSMP and Assisted NSMP...

If You Are Using Established Age Groups, The Nutrient Standards* Are:

Age/Grade Group:	Ages 3-6	Ages 7-10	Ages 11-13	Ages 14 and older
Energy Allowances (Calories = cal.)	**419 cal.**	**500 cal.**	**588 cal.**	**625 cal.**
Protein (grams = g)	**5.50 g**	**7.00 g**	**11.25 g**	**12.50 g**
Calcium (milligrams = mg)	**200 mg**	**200 mg**	**300 mg**	**300 mg**
Iron (milligrams = mg)	**2.5 mg**	**2.5 mg**	**3.4 mg**	**3.4 mg**
Vitamin A (Retinol Equivalents = RE)	**119 RE**	**175 RE**	**225 RE**	**225 RE**
Vitamin C (milligrams = mg)	**11.00 mg**	**11.25 mg**	**12.50 mg**	**14.40 mg**
Total fat	**No more than 30 percent of total calories should come from fat.**			
Saturated fat	**Less than 10 percent of total calories should come from saturated fat.**			

Remember these important points: (1) This chart shows minimum *school week averages* for nutrients except for fat and saturated fat. (2) Fat should not exceed 30 percent of calories over a school week; and *saturated* fat should be less than 10 percent of calories over a school week. In addition, be aware that for both total fat and saturated fat, the grams of fat will vary depending on the calorie level.

* **NOTE:** These standards may change over time to reflect new nutrition knowledge. As they are updated, USDA will notify your state agency.

What if your school's grade structure does not match the established age or grade groups?

As we've seen, an important part of your menu planning will be identifying the grade or age groups you will use. While many schools' grade structures will match the established groups, some will not. If this is true for your schools, you can easily determine how to group grades or ages by following this rule:

- **If *only one* age or grade is outside the established range of K-6 or 7-12...** you may use the *one* age or grade group into which most of the children fit.
- **However, if *more than one* age or grade is outside of the established range...** you will need to use two grade or age groups.

Here is an example:

Some food service directors are planning lunches for four schools. The first school has Grades K through 8. The second has Grades 5 through 8. The third has Grades 6 through 9, and the fourth, K through 7.

Knowing that the two established grade groups are K-6 and and 7-12, here is what the planners do and why:

For the Grades K-8 school...

Grade 7 and Grade 8 are both beyond the K-6 range, so the planners know they cannot use K-6 for all of the children. They decide to use both established grade groups — K-6 and 7-12.

For the Grades 5-8 school...

Here, too, there is more than one grade outside of the established range. Grade 5 is two grades *below* the Grade 7-12 range. And Grade 8 is two grades *above* the K-6 range. Once again, the menu planners use both established grade groups — K-6 and 7-12.

For the Grades 6-9 school...

The menu planners use the 7-12 grade group for all of the children. They can do this because Grade 6 is the only grade below the established range of 7-12.

For the Grades K-7 school...

The menu planners use the K-6 grade group. They can do this because Grade 7 is the only grade above the established range of K-6.

What about using customized age groups?

If you choose to use age groups in planning meals with NSMP or Assisted NSMP, you may want to stay with the *established* age groups. These will already be programmed into any USDA-approved software. As we've seen, there are four established age groups. In years, they are:

- Ages 3-6
- Ages 7-10
- Ages 11-13
- Ages 14 and older

However, since not all school districts are divided into these four age groups, the NSMP software will also allow you to create your own *customized* age groups. In fact, to most accurately target the nutrient needs of the children you serve, this is the recommended method.

The process involves three main steps. You will:

1) Decide what age groups are appropriate for your school or schools. Keep in mind that you must use at least two age groups with any school that has Grades K-12. Also remember that when there is a wide range of ages and grades, it is recommended that the age group break be right at or above the sixth grade level.

2) Determine the appropriate nutrient standards for these new groups. The computer will do this by weighting, combining, and/or averaging the RDA for different age groups. While this sounds complicated, the software is set up to accomplish this. You will simply enter the age grouping into the computer. The software program will complete the calculations.

3) Incorporate into the software the customized age groups you have developed. Whenever you want to see the nutrient standards for these groups, the computer will figure them out and show them to you.



Why is sixth grade such an important dividing line?

As you can see from the established age and grade groups — as well as from the guidelines for customizing new age groups — sixth grade marks an important dividing line for menu planners.

This is because one of the greatest jumps in children's calorie and nutrient needs occurs between ages 10 and 11 years, which is generally between Grades 5 and 6.

If one grade or age is added on either side of the 10-to-11 age break, there is not too much difference in the RDA requirements for each nutrient. However, when several grades or ages are added on either side of the 10-to-11 age break, either...

> ...too few nutrients and calories will be provided for children age 11 years and older.

- OR -

> ...too many calories and too much fat will be provided for children age 10 years and younger.

3. Criteria for a Reimbursable Meal

To qualify for reimbursement, what must a lunch include? What must a breakfast include?

Under NSMP and Assisted NSMP, a reimbursable meal must contain a minimum of *three menu items*. This is true for lunch and breakfast; however, as we'll see below, the three menu items are not the same for both meals.

In addition, a reimbursable meal must *meet the nutrient standard* for the appropriate age or grade group when the nutrients in those foods are averaged over a school week. This can be accomplished by following the instructions in the USDA-approved software.

Let's look at how these criteria are summarized in the chart in Appendix 2. The chart states that a reimbursable meal:

- *Contains at least three menu items.*
- *Meets the nutrient standards for the appropriate grade or age groups when averaged over 1 school week's menu.*

Below and on the next few pages, we'll see what each of these statements means in terms of day-to-day menu planning. Then, later in this chapter, we'll spend more time looking at menu items under "Meal Structure."

The first statement in Appendix 2 under "Criteria for a Reimbursable Meal" reads: *Contains at least three menu items*. Looking at this more closely, we'll want to know: What is a menu item? What are the three menu items a lunch must include? What are the three menu items a breakfast must include?

What is a menu item?

A menu item may be any single food or combination of foods *except*: (1) a condiment *or* (2) a food of minimal nutritional value not included in a menu item.

Condiments include such items as relishes, catsup, mustard, jelly, gravies, and table spreads.

Foods of minimal nutritional value include such things as chewing gum, soda water, water ices, and certain candies. See Appendix 7 for definition under USDA regulations.

There are three *categories* of menu items:

- Entrees
- Milk
- Side Dishes

What three menu items must a LUNCH include?

A lunch planned with NSMP or Assisted NSMP must include AT LEAST these *three* menu items:

1) **Fluid milk served as a beverage**.
2) **An entree.** An entree is a combination of foods or a single food item offered as the main course. The entree is the central focus of the meal and forms the framework around which the rest of the meal is planned.
3) **A side dish.** This can be any other food except a condiment or a food of minimal nutritional value.

What three menu items must a BREAKFAST include?

A breakfast planned with NSMP or Assisted NSMP must include AT LEAST these *three* menu items:

1) **Fluid milk served as a beverage or on cereal or both.**
2) **A side dish.** This can be any other food except a condiment or a food of minimal nutritional value.
3) **Another side dish.** This also can be any other food except a condiment or one of minimal nutritional value.



Now let's look at the second statement in Appendix 2 under "Criteria for a Reimbursable Meal." It reads: *Meets the nutrient standards for the appropriate grade or age groups when averaged over 1 school week's menu.*

Earlier in this chapter and also in Chapter 1, we looked at nutrient standards and how they relate to age and grade groups. But, what does "over 1 school week's menu" mean in practical terms — for example, what about weeks that are longer or shorter than 5 days? And, what foods count for nutrient analysis? Here are some answers.

- **How is "school week" defined? What about weeks that are longer or shorter than 5 days?**

  For NSMP and Assisted NSMP, a school week is defined as a minimum of 3 consecutive days and a maximum of 7 consecutive days. If there are fewer than 3 consecutive days in a week, the days in that week are combined with the coming or prior week for nutrient analysis.

  For example, in many areas there are only 2 days of school during Thanksgiving week. Those 2 days could be combined with the week before Thanksgiving, or the week after. The same could be done for other holiday periods or during the first and last weeks of school.

  By combining weeks in this way, the menu planner avoids problems in meeting the nutrient standards that can arise out of analyzing a small sample of meals.



■ **What foods count for NUTRIENT ANALYSIS? Are condiments included?**

All foods served in a meal, including condiments, are included in the nutrient analysis and count toward meeting the nutrient standards for the meal. (Condiments do not count as required menu items.)

However, foods or menu items that are considered foods of minimal nutritional value under USDA regulations — such as chewing gum, soda water, water ices, and certain candies (see Appendix 7) — can only be included in the nutrient analysis calculations if they are part of a menu item.

It's important to note that *only* foods for *reimbursable* meals are included in the nutrient analysis. Foods for a la carte or adult sales are *not* included in the nutrient analysis.

4. Meal Structure for Lunch

The chart in Appendix 2 states:

A minimum of three menu items must be offered: an entree, milk, and at least one side dish.

- *Offer an entree: an entree is a single food item or a combination of foods served as the main dish.*
- *Offer fluid milk as a beverage.*
- *Offer at least one side dish; may be any food item except a condiment or a food of minimal nutritional value that is not part of a menu item.*

As we've already seen on page 72, a menu item may be any single food or combination of foods *except* (1) a condiment or (2) a food of minimal nutritional value not included in a menu item. Now let's look at *what* foods count as menu items and *how* you will count menu items that include more than one food.

What foods count as menu items?

Under NSMP and Assisted NSMP all foods — *except* condiments and foods of minimal nutritional value not served as part of a menu item — count as menu items.

In the example on page 43, we saw that with Food-Based Menu Planning chocolate pudding generally would *not* count as a food item. In contrast, with NSMP and Assisted NSMP, chocolate pudding would count as a menu item (but not as a substitute for fluid milk served as a beverage).

How do you count foods like a hamburger with a bun? Is this one menu item or two?

This depends on how it is *served*. If a menu item includes two (or more) foods but is served as *one* dish, it is considered *one* menu item because students cannot choose to take some of the foods without the others.

On the other hand, if those same two foods are served in a manner that allows students to choose each separately, they are considered *two* menu items.

As the menu planner at the local level, *you* determine how food items are served and, therefore, how menu items are counted. For example:

If you serve "Hamburger on a Bun"...

... and the student does not have the choice of taking either the hamburger or the bun separately...

this counts as ONE menu item.

If you serve "Hamburger Patty" and "Bun"...

... and the student can choose one or the other or both...

this counts as TWO menu items.

Both of these options are shown in the screened box on the next page, along with two other examples.

One menu item or two? It depends on you...



You are planning lunch with NSMP. Will the foods you have chosen count as one menu item or two? How you serve them is the deciding factor.

In the examples below, foods are listed in two columns. The first column shows foods that will be served together as a unit. These will count as one menu item because students cannot choose to take only some of the foods.

The second column shows foods that will be offered in the same meal, but this time students *can* select them separately. In this case, the foods will count as two menu items.

One Menu Item	Two Menu Items
Hamburger on a Bun	Hamburger Patty Bun
Turkey and Gravy on Mashed Potatoes	Turkey and Gravy Mashed Potatoes
Burrito Grande (Tortilla, Beans, Rice, Tomato, Lettuce, Salsa)	Bean Burrito Spanish Rice

As you think about how you will serve and count menu items, remember that the real test of your menu planning is the nutrient analysis averaged over a week. This analysis will tell you if you are reaching the required nutrient and calorie standards.

5. Meal Structure for Breakfast

The chart in Appendix 2 states:

> *A minimum of three menu items must be offered: milk and at least two side dishes.*
>
> - *Offer fluid milk as a beverage or on cereal or both.*
> - *Offer at least two side dishes; may be any food items except a condiment or a food of minimal nutritional value that is not part of a menu item.*

For information on how to count menu items, see page 76.

COMPARING BREAKFAST AND LUNCH:

For NSMP and Assisted NSMP, Minimum Required Menu Items Are...

Three Menu Items for BREAKFAST...	Three Menu Items for LUNCH...
One... Fluid milk served as a beverage or on cereal or both	**One...** Fluid milk served as a beverage
Two and three... Any two other foods except (1) a condiment or (2) a food of minimal nutritional value that is not part of a menu item	**Two...** An entree **Three...** Any other food except (1) a condiment or (2) a food of minimal nutritional value that is not part of a menu item

What about salad bars and other theme bars?

In many schools, theme bars are popular with students. Offerings range from salads, to pasta, tacos, potatoes — and more. Some schools serve complete lunches or breakfasts this way. Others offer only side dishes. Just as theme bars work well with Food-Based Menu Planning, they also work well with Nutrient-Based Menu Planning.

Schools using NSMP and Assisted NSMP may serve lunch this way as long as it consists of at least: (1) an entree; (2) fluid milk served as a beverage; and (3) one other menu item. Schools may serve breakfast this way as long as it consists of at least fluid milk and two other menu items.

Condiments and foods of minimal nutritional value do not count as menu items. For nutrient analysis, however, you will include condiments and foods of minimal nutritional value that are part of menu items.







6. Offer versus Serve (OVS) for Lunch

- **How does Offer versus Serve (OVS) work for lunch with NSMP and Assisted NSMP? Are the goals of OVS still the same?**

With NSMP and Assisted NSMP, OVS works as follows for lunch:

- Schools must offer students at least three menu items: an entree, fluid milk, and another menu item.
- Students must select at least two of the three menu items. One of the two menu items selected must be an entree.
- If more than three menu items are offered as a meal unit, students may decline no more than two menu items of the meal unit. (Students can never decline the entree.)

For an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

Senior high schools are required to have OVS for lunch. Local school food authorities can choose whether or not they want to have OVS for their junior high, middle, and elementary schools.

The goals of OVS are the same as they have always been — to minimize plate waste and encourage schools to offer more food choices. For more information on the benefits of OVS, see page 52. For more information on OVS and Nutrient-Based Menu Planning, see Appendix 5.

7. Offer versus Serve (OVS) for Breakfast

- **What is the goal of OVS for breakfast with NSMP and Assisted NSMP? How does OVS work for breakfast?**

The goal of OVS for breakfast is the same as for lunch. OVS at breakfast is optional at all grade levels. *Here's how it works*: Students may decline a maximum of one menu item out of the three or more required menu items offered.

As we noted above, for an OVS meal to qualify as reimbursable, it must contain certain combinations of foods. Menu planners need to make sure cashiers and students can identify at the "point of service" which combinations of food items qualify as a reimbursable meal.

Determining a reimbursable OVS lunch:

Below are two menus. For each, there is a list of possible reimbursable meals, along with the reasons why these meals would qualify as OVS lunches with NSMP and Assisted NSMP.

- **MENU #1**

For these menu items...

Taco Salad
Watermelon Wedge
Choice of Milk

The possible reimbursable meals are...

1. Taco Salad, Watermelon Wedge, Milk
2. Taco Salad and Watermelon Wedge
3. Taco Salad and Milk

The rationale is...

1. Students must take an entree.
2. Students may decline only one menu item when the minimum of three menu items are offered as a meal unit.

- **MENU #2**

For these menu items...

Taco
Refried Beans
Rice
Watermelon Wedge
Choice of Milk

There are many possible reimbursable meals. Here are some of them:

1. Taco, Refried Beans, Rice
2. Taco, Rice, Watermelon Wedge
3. Taco, Watermelon Wedge, Milk
4. Taco, Refried Beans, Watermelon Wedge
5. Taco, Refried Beans, Milk
6. Taco, Rice, Milk

The rationale is...

1. Students must take an entree.
2. Students may decline no more than two menu items if more than three are offered as a meal unit.

8. Standardized Recipes

Are standardized recipes required with NSMP and Assisted NSMP? Where can you get standardized recipes for school meals?

Standardized recipes are an important management tool in any food service program. They are highly recommended for all menu planning systems, and they *are required* for NSMP and Assisted NSMP.

Standardized recipes help ensure that the correct portion size is served to all students. In addition, when state agency representatives analyze the menus to check for compliance with the nutrition goals, they will need to know which recipes were used and have copies of those recipes.

Standardized recipes and preparation techniques should be used for all menu items that have two or more ingredients or that require any preparation.

Sources of standardized recipes include the following. These are also listed with additional information in Appendix 3:



- *USDA Quantity Recipes for Schools*
- *A Tool Kit for Healthy School Meals: Recipes and Training Materials*
- *The School Lunch Challenge I, II, and III Recipes*

Shown here is Chicken Stir-Fry from USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials.* See Appendix 3 for more information.

9. Processed Foods

■ **When using processed foods, such as brand-name products, how will you get the information you need for nutrient analysis?**

When you are using processed foods, it's important to have nutrition information for the products you are using. While one manufacturer's product may have the same name as another's, the ingredients can vary greatly.

For example, two different manufacturers may offer a vegetarian chili, but it is unlikely both will use the same ingredients in identical proportions. One may put in twice as many kidney beans, for instance, or maybe only half as many tomatoes. One producer's chili may have more fat than another's. As a result, the nutrient content of the two products will be very different.

How will you get the information you need?

In many instances, this information will already be programmed into the USDA-approved software as part of the Child Nutrition Database (CN Database). The CN Database contains files that list food items and nutrients. You will find information on:

- Reference foods commonly used by schools
- USDA commodity foods
- USDA quantity recipes for school food service
- Brand-name processed foods used in schools
- USDA's *Food Buying Guide*

These files are "locked" in order to keep them accurate and reliable. This means you can see and use what is in them but cannot add, delete, or alter information.

You can, however, open up and work with the empty files included in the software. These allow you to develop your own local database. If you plan to offer a food item but do not find it listed in the CN Database, you will need to obtain the nutrient analysis from the product's food label or by contacting the manufacturer, then enter the information into your database.

Foods that are included in the reference foods of the CN Database, such as basic condiments, canned vegetables, fruits, etc., can be used without obtaining brand-name analysis.

10. Production Records

Are production records required for NSMP and Assisted NSMP?

Yes, program regulations require schools to keep food production and menu records. For example, you will need to keep records of:

- Menus
- Product specifications
- Recipes and preparation methods
- Projected production of menu items
- Number of reimbursable meals

See Chapter 7 for sample production records.

11. Child Nutrition Labeling

Does the Child Nutrition Labeling Program apply to NSMP and Assisted NSMP?

CN labels on products show the product's contribution toward meal pattern requirements. Because NSMP and Assisted NSMP do not use meal patterns as planning tools, CN Labeling does not apply to these menu planning systems. However, schools can serve CN-labeled products in meals planned with NSMP and Assisted NSMP.

The CN-labeled product may already be in the Child Nutrition Database that is part of the USDA-approved software. If the CN-labeled product is not in the Child Nutrition Database, you can enter into your local database the nutrient information you have obtained from the product's label or from the manufacturer.

For more information on CN labeling as used with Traditional and Enhanced Food-Based Menu Planning, see Appendix 6.

CHAPTER 4

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

The ABC's of Successful Menu Planning



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The ABC's of Successful Menu Planning

How important is menu planning? In a successfully managed school lunch or breakfast program, it may be the *most* crucial step. The nutritional value of meals and compliance with federal program requirements depend on careful menu planning. But that's not all.

The menu influences almost *every* aspect of the food service operation — from what foods are purchased and how they are prepared, to whether or not meals are popular with students. Good planning can make a huge difference!



In this chapter, we'll look at the ABC's of successfully planning appealing school meals. We'll review the menu planning process and some important planning principles. We'll also explore ways to use the Dietary Guidelines for Americans and the nutrient standards for healthy school meals as planning tools.

Planning menus involves much more than listing specific foods for daily meals. A menu planning worksheet can be helpful in organizing the total job. You will find sample worksheets and sample menus at the end of this chapter.









THE MENU PLANNING PROCESS — *TEN STEPS TO SUCCESS*

No matter which menu planning system you select — Traditional or Enhanced Food-Based, NSMP or Assisted NSMP — you will proceed through several logical steps. In the next few pages, we'll look at these steps. Where appropriate we'll add extra details, first for Food-Based Menu Planning, then for Nutrient-Based Menu Planning. The ten steps are:

1. *Schedule a time to plan menus. Collect menu resources.*
2. *Think about where you are and where you want to go.*
3. *Determine a time period.*
4. *Focus on the age or grade group(s) you will serve.*
5. *Decide the number of choices you will offer.*
6. *Select the entree for each day's breakfast and lunch.*
7. *Select the other menu item or items.*
8. *Provide fluid milk choices.*
9. *Make sure you are meeting nutrition goals.*
10. *Evaluate what you have planned.*

STEP 1 Schedule a time to plan menus. Collect menu resources.

Plan menus well in advance, preferably a month or more ahead of the time they are to be served. Depending on your role in menu planning, you will want to have time to:

(1) Study food inventories, current market and price reports, previous menus, and food production records that indicate student preferences.

(2) Involve students, parents, and other interested parties in the planning.

(3) Select and test food products and recipes.

(4) Plan and check the resulting menus.

To be prepared, you will want to pull together a variety of menu resources. These might include, for example, past successful menus, recipe files, and food trade journals. For easy reference, also have on hand copies of food production and inventory records, as well as sales histories, and publications such as USDA's *Food Buying Guide for Child Nutrition Programs, USDA Quantity Recipes, A Tool Kit for Healthy School Meals: Recipes and Training Materials*, and *Choice Plus*. (See Appendix 3 for more information on these publications.)

In addition, you will want to review important program information, such as requirements, nutrition goals, and lists of available USDA commodities. Also, note important dates on the school calendar and other opportunities for special promotions.

STEP 2 Think about where you are and where you want to go.

An important next step is to take time to re-examine your current system. Review your menus, the products you purchase, and preparation techniques. Will they work in any new menu planning system you may be considering? With the Dietary Guidelines and students' nutrition needs and preferences in mind, take another look at what you have been serving. Which areas are okay? Which need modifying?

- Are you planning sufficient variety?
- Do you need more servings of grains/breads?
- Can you serve more vegetables/fruits?
- How often do you serve lowfat entrees?
- Do you need to add foods or increase servings to provide more calories?
- Do you need to serve some foods less often?

STEP 3 DETERMINE A TIME PERIOD.

For all of the menu planning systems, there are weekly nutrient requirements and nutrition goals *so be sure to plan menus by the week*. Weekly nutrient requirements are based on the normal school week of 5 consecutive days. They are adjusted accordingly if the school week is longer or shorter than 5 days.

In addition, you may want to select a time frame for a cycle menu. Cycle menus are menus planned for a longer time period and repeated on a regular basis. A cycle can be any number of weeks that works for your operation. See the screened box on page 89 for more information on cycle menus.

STEP 4 FOCUS ON THE AGE OR GRADE GROUPS YOU WILL SERVE.

Although Food-Based and Nutrient-Based Menu Planning differ in many respects, the starting point for both is focusing on the ages or grades of the students you will serve.

To review how to select and use age/grade groups for Food-Based Menu Planning (Traditional and Enhanced), turn back to Chapter 2. For Nutrient-Based Menu Planning (NSMP and Assisted NSMP), see Chapter 3.

STEP 5 DECIDE THE NUMBER OF CHOICES YOU WILL OFFER.

The number of choices you offer will depend on your operation. However, keep in mind that the variety offered does not affect *minimum requirements*. See Chapter 2 for minimum requirements for Traditional and Enhanced Food-Based Menu Planning; see Chapter 3 for NSMP and Assisted NSMP.

In making your decision, try to balance cost, nutrients, equipment used, and labor needed to prepare each of the choices. Start by adding one or more entrees, then add a selection of side dishes that go with the entree choices. This approach works for any of the menu planning systems.

Offering choices allows you to add new foods without risking a drop in participation. Remember that it often takes several opportunities for students to try foods before they learn to like them.

MAKING THE MOST OF CYCLE MENUS

If carefully planned, cycle menus can offer a number of advantages. They can...

- Save time in repetitive functions such as precosting and work schedules.
- Adapt easily to varied grades and ages.
- Allow flexibility for such things as seasonal changes, availability of commodity foods, and special events.
- Allow more time for training and marketing.

Plan with *your* schools' needs in mind. You may want to have a seasonal cycle, for example, or a holiday cycle based on school celebrations.

To use cycle menus to best advantage, be careful to avoid the potential pitfalls. Here are some tips:

- To avoid having cycle menus become monotonous and repetitious, plan carefully and evaluate continually.
- So that holidays and special school activities won't go unrecognized, be sure to note them on the calendar well in advance. Designate specific dates when a special menu is to be substituted for the one in the cycle.
- To make the best use of foods in season, be flexible. Use general descriptive terms — for example, indicate "fresh fruit" rather than "apples." Or, plan one cycle for each season: Fall (September, October, November); Winter (December, January, February); and Spring (March, April, May).
- Be ready to make adjustments. For example, if you receive USDA-donated foods that don't fit in, you may want to make changes.

Flexibility is the key! Review menus frequently to make adjustments for changes in availability of USDA-donated foods; to take advantage of an especially good buy or a seasonal food; and to allow for a special occasion. It's a good idea to keep a small inventory of substitute items to use in the event of an emergency or a changing situation.

STEP 6 SELECT THE ENTREE FOR EACH DAY'S BREAKFAST AND LUNCH.

Remember that the entree sets the stage for the rest of the lunch menu and sometimes for the breakfast menu. It may determine whether students decide to eat that day.

Entrees should be selected first in menu planning because they are the central focus of a meal. They form the framework around which you will plan the rest of the menu.

If you are using NSMP or Assisted NSMP, you will find you have a different kind of flexibility than you had when working with meal patterns. This is because you are no longer serving specific food components in specific amounts. While this flexibility can help you make meals interesting and appealing, it is important to continue to use good menu planning practices.

Be careful when selecting entrees:

(1) If you include an entree that is not central to the meal or is not recognized by students as the entree, this could result in poor acceptance.

(2) Follow a plan for providing a *variety* of entrees.

(3) If you do not have entree choices and you repeat the same entree during a 2-week period, consider varying the other foods served with it.

STEP 7 SELECT THE OTHER MENU ITEM OR ITEMS.

You will want to include menu items that complement the entree. Plan to use plenty of vegetables, fruits, and grains. Keep in mind that students like many vegetables raw as well as cooked. Try to introduce new foods, starting with small amounts.

STEP 8 PROVIDE FLUID MILK CHOICES.

Plan to make a variety of milk options available every day. Remember that offering lowfat or fat-free milk is a good way to reduce fat and be consistent with the Dietary Guidelines. (See Appendix 8 for information on milk requirements and the labeling of reduced-fat and lowfat milk.)

Schools are required to offer a variety of milk choices consistent with students' preferences in the prior year. If a specific type of milk represents less than 1 percent of the total amount of milk consumed in the prior year, the school may elect not to offer that type of milk for lunch.

STEP 9 Make sure you are meeting nutrition goals.

As you think about meals that will appeal to your student customers, keep the nutrition goals in mind. Looking at your menus, ask yourself questions like the following:

Do our meals provide students with adequate calories and nutrients while reducing fat, saturated fat, cholesterol, and sodium?

What kind of example do our meals set for students? Are they consistent with the recommendations of the Dietary Guidelines? Do they encourage students to eat a variety of foods?

Will the foods on the menu appeal to students and taste good?

See Chapters 6 and 8 for tips on preparing and marketing healthful meals.

LOWER FAT MILK CHOICES CAN MAKE A BIG DIFFERENCE

Offering lower fat milk choices is an easy way to reduce total fat and saturated fat. Here's an example:

A menu planner decides to offer the following items for lunch:	**With WHOLE milk...**	**With 2%-fat milk...**
- *Breaded Chicken on a Roll with Lettuce and Tomato* - *Potato Wedges* - *Cherry Cobbler* - *Milk*	34% of calories will come from fat 11% of calories will come from saturated fat	32% of calories will come from fat 9% of calories will come from saturated fat
	With 1%-fat milk...	**With fat-free milk...**
	31% of calories will come from fat 8% of calories will come from saturated fat	29% of calories will come from fat 7% of calories will come from saturated fat

In this example, offering fat-free milk instead of whole milk will reduce calories from fat by 5% and calories from saturated fat by 4%.

STEP 10 EVALUATE WHAT YOU HAVE PLANNED.

Before you decide to wrap up a planning session, look over what you have planned. Will your meals meet your goals for nutritional value? For variety and customer appeal? What about cost?

Will you be serving breakfast as well as lunch? Does your lunch menu repeat any of the foods you have selected for breakfast? How does what you have planned for breakfast affect equipment and staffing needs for lunch?

Do your meals comply with the requirements of the National School Lunch and School Breakfast Programs? By meeting these requirements, you are making sure your meals will qualify for the appropriate federal reimbursement.

As you know, your state agency periodically reviews your meals to make sure they are consistent with program requirements. How you evaluate your meals — and how the state agency will do its review — will depend on which menu planning system you have selected.

What about special needs? School meal regulations require you to make substitutions for individual children with a physician's prescription for dietary accommodations due to a disability. You may also make substitutions for children with medical or other special dietary needs who do not have a disability. Exceptions must be supported by a statement from a recognized medical authority and must include recommended substitute foods. Be sure to keep this statement on file in the school. For more information, contact your state agency.



Pictured here is Beef Stir-Fry, one of many exciting entrees included in USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials.* See Appendix 3 for more information.



BASIC MENU PLANNING PRINCIPLES

Across the country, schools are offering meals in a variety of interesting forms — from simple boxed lunches to many-item buffets. Just as school lunches and breakfasts come in many forms, so do the foods that go into them.

Advances in food technology make it possible to select foods in many forms — frozen or chilled, partially or totally prepared, pre-portioned or in bulk, pre-prepared or as ingredients to put together "from scratch."

All of this makes menu planning exciting as well as challenging. Where do you begin? The basic menu planning principles listed below and discussed on the following pages are a good starting point. Keep them in mind as you think about your customers' preferences and nutrition needs.

1. Strive for balance.
2. Emphasize variety.
3. Offer choices.
4. Add contrast.
5. Think about color.
6. Consider eye appeal.

1. Strive for balance.

As you work to plan meals that are nourishing, appealing, and taste good, you will want to strive for balance in a number of different ways. Select and combine foods in ways that...

... help you meet the required nutrient standards. For example, as you work to achieve calorie goals and target fat levels, look for ways to balance higher fat foods with items that are lower in fat.

... balance flavors in appealing ways. Make sure individual foods, when served together, make a winning combination. Too many strongly flavored foods may make a meal unacceptable to children. Too many mild flavors may make it too bland.

... balance color, texture, size. Be sure your meals have pleasing, eye-appealing combinations of foods. To add interest, see suggestions listed under contrast and eye appeal on pages 96 and 97.

Here are some tips for achieving balance:

Balance higher fat foods with ones that have less fat. For starters, avoid having too many higher fat foods in the same week. In other words, don't include pepperoni pizza on a week's menu if you are already planning to offer hot dogs and chicken nuggets.

In addition, balance a higher fat entree with lowfat entrees. For example, when you are offering a cheeseburger, also offer a turkey sandwich.

And look for ways to use lowfat side dishes to balance a higher fat entree. For example, with a grilled cheese sandwich, offer carrot and celery sticks.

Use a combination of mild and strong flavors. While some students enjoy strongly flavored foods, be careful not to serve too many in the same meal. For example, a meal with pepperoni pizza, cajun potatoes, coleslaw, and a brownie has too many spicy and strong flavors.

Use a variety of shapes and sizes. To make a menu interesting, include different shapes and sizes. If you serve fish sticks, oven-baked French fries, carrot sticks, and a banana, you have several similarly shaped foods. A meal with more varied shapes might feature: a baked chicken leg, mashed potatoes with lowfat gravy, seasoned green beans, and a watermelon wedge.

2. Emphasize variety.

Serving a variety of foods is important because no one food or group of foods can give us everything we need for a healthy diet. Variety also makes menus interesting and appealing. To add variety in school meals, try to...

- **... Include a wide variety of foods from day to day.** Unless you provide choices, avoid planning the same form of food on consecutive days, such as meatballs with spaghetti on Monday and meat ravioli on Tuesday.
- **... Vary the types of main courses you serve.** For example, serve casseroles one day, soup and sandwiches the next, or perhaps a main-dish salad.
- **... Include different forms of foods, and prepare them in a variety of ways.** For instance, some vegetables are good eaten raw. If you usually serve a particular vegetable cooked, serve it uncooked if it is good that way. Or cook it but use different sauces or seasonings. In any case, be sure the "different way" of serving is as appealing as the "usual way."
- **... Include a surprise item or a small amount of a new or unfamiliar food periodically.** For example, try adding raw cauliflower, red cabbage, or spinach to a salad.

3. Offer choices.

Any school food service program, regardless of size, can offer choices in the menu. Try the following...

- **... Decide on the number of choices you can offer in each category of food, and plan menus accordingly.** With careful planning and efficient management, offering choices need not increase your operating costs.
- **... Offer choices within as many components as you can.** For example, offer two entrees and let students select one. Offer three or more fruits and vegetables and let students choose two. Offer two or more grains/breads and let students choose one or two. Offer a variety of milk choices and let students choose one.
- **... Include the food combinations most acceptable to students in your school.** The lower the acceptability of the menu item, the less frequently you should offer it.

4. Add contrast.

Strive for contrasts of texture, flavor, and methods of preparation.

... **Think about the texture of foods as well as their taste and appearance.** For added appeal, serve a green salad or raw vegetable with spaghetti. Offer a crisp fruit or vegetable with a burrito, and crisp steamed carrots and broccoli with meatloaf. Pair toasted garlic bread and cold broccoli salad with cheese ravioli.

... **Use some crisp, firm foods with soft creamy ones.** A green salad, raw vegetable sticks, or a hard roll could provide crispness to a meal with macaroni and cheese.

... **Avoid having too much of the same type of food in the same meal.** A lunch with too many starches or too many sweets lacks contrast as well as balance. So does a meal with too many heavy foods. If you are serving a hearty casserole, plan to offer a light vegetable or light dessert such as fresh fruit.

... **Use a pleasing combination of different sizes and shapes of foods.** Within a meal, present foods in several different shapes, such as cubes, mounds, shredded bits, and strips. A meal with cubed meat, diced potatoes, mixed vegetables, and fruit cocktail needs more contrast in size and shapes of foods.

5. Think about color.

Use combinations of colors that go together well, and strive for contrast and maximum color presentation. A good rule of thumb is to use at least two colorful foods in each menu for visual appeal. In addition...

... **Avoid using too many foods of the same color in the same meal.** A meal with turkey, rice, cauliflower, white bread, and pears would lack color contrast. A better combination would be turkey and cranberry sauce, green peas, whole wheat bread, and pears.

... **Remember that vegetables and fruits are great for adding natural color to side dishes as well as entrees.** A slice of tomato really brightens up a potato salad. A fresh grape or strawberry livens up a dish of diced pears or peaches.

... **Use colorful foods in combination with those that have little or no color.** Serve broccoli spears with whipped potatoes, for example. Add pimento or green pepper to corn. Offer a bright red apple and green lettuce with a hamburger and baked beans. Serve green peas and apricots with oven fried chicken and mashed potatoes.

... **And don't forget spices.** It's easy to sprinkle on a dash of cinnamon or paprika for added color.



6. Consider eye appeal.

Your customers' first impression will be how a meal looks. Make sure what you serve looks good as well as tastes good.

... **Think of the total presentation.** As you plan for color, consider the color of the dishes, plates, or trays to be used as well as the colors of the foods.

... **Make the serving line attractive.** Try to add color and texture to the serving line. Where possible, garnish food in steamtable pans. For example, add a few red or green pepper rings to a pan of macaroni and cheese. Put parsley, a tomato wedge, or a piece of brightly colored fruit on a tray of sandwiches. Put a bit of paprika or some lemon slices on a pan of steamed rice.

... **Plan the way you will place the menu items on the tray or plate.** Visualize how the food will look when served and decide on the most attractive arrangement. Before serving the lunch, portion a sample plate so that all servers can see how it should look. This is also a good way to show them correct serving sizes.

Keep in mind special considerations:

As you apply the basic menu planning principles, keep in mind special considerations such as: regional food preferences, holidays and other special occasions, climate and seasons, and product availability.

Food preferences: Consider the regional, cultural, and personal food preferences of the students you serve, but don't be afraid to introduce new foods from time to time. Include new foods *as choices* and encourage students to try them. Be sure menus don't reflect *your* personal food prejudices.

Holidays and special occasions: Plan festive lunches and breakfasts for national holidays, school events, and special occasions like parents' visiting days. Don't forget National School Lunch Week, School Breakfast Week, and National Nutrition Month!

Climate or seasons: Include more hot foods in cold weather, and more cold foods in warm weather.

Product availability: Use foods in season. Plan to serve plenty of fresh fruits and vegetables when they are plentiful and at the peak of quality.

Consider available staff and equipment:

You will want to plan meals you can prepare and serve with available facilities, equipment, and staff. Here are some tips:

When thinking about facilities and equipment:

Consider the kind and size of ovens, kettles, steamers, and other equipment; also think about freezer and refrigeration space.

Consider sheet and baking pans, steamtable inserts, and other equipment used in meal preparation.

Consider the numbers and kinds of serving tools and dishes or compartments in a compartment tray needed to serve each meal.

When thinking about available staff:

Plan lunches and breakfasts employees can prepare in the time available.

Consider the amount of hand preparation required for each menu.

Schedule employees' time so their particular skills can be used to best advantage.

Balance the workload — food preparation and clean-up — from day to day and from week to week.

If you also order or purchase food:

In some school districts, menu planners are also responsible for ordering and purchasing food. If this is part of your job, you may find the following tips helpful.

Consider the availability of foods from local suppliers. If you need to reduce the number of deliveries, you can plan menus that include fresh produce on consecutive days. Do the same for commercially baked breads.

Operate within a budget, and precost your menu. Keep records of the approximate cost per serving of each menu item in order to determine what each lunch will cost as well as the average lunch cost per month. You can make substitutions if the average cost of the menu runs too high.

Postcost menus and compare with precost. Use this information to make menu adjustments and pinpoint possible problem areas.

Keep abreast of price trends and the market availability of various foods. Identify extremes — items which are very high priced or those which are very low priced — with a view to minimizing and maximizing, respectively, their use in the menu.

Use USDA-donated foods when available. Use them as efficiently and creatively as you would if you had purchased the food.

Keep records of food purchased, used, and available in inventories. Also keep customer participation records and production records that note acceptability.

Tips on purchasing quality foods:

Foods you serve can only be as good as the quality of the foods you purchase. Careful use of competitive buying will not only help control food costs but will also help upgrade the quality of your meals. Here are some additional tips...

Be familiar with sources of supply. Buy from suppliers who provide the best quality food at the most reasonable prices. Seek out potential new suppliers. Put them on your mailing list for bids and requests for proposals. Also look for opportunities to buy through cooperative purchasing groups (co-ops).

Buy according to how you will use a product. Consider grade, style, type, size, count, container, and packing medium.

Develop clear, concise purchase specifications and food product descriptions. To ensure the purchase of quality foods at competitive prices, write specifications and descriptions that will make clear what you want and what you will accept. The following publications may be helpful: *First Choice* and *Choice Plus*. For more information, see Appendix 3.

Inspect upon delivery. Make sure what is delivered meets your specifications. Whenever possible, buy foods that are federally graded and inspected.

Remember storage facilities. Decide when to buy each type of food, keeping in mind perishability and storage space.

Keep records of food purchases.

For commercially prepared foods, determine the quantities of foods needed and portion sizes according to the age/grade group to be served. Be sure the purchase specifications include that information.



PUTTING THE DIETARY GUIDELINES TO WORK FOR YOU ...

Applying the advice contained in the Dietary Guidelines for Americans is the best place to start when planning healthy school meals. This part of Chapter 4 offers practical tips for putting the Dietary Guidelines to work. We'll look at breakfast first, then lunch. Before beginning this section, you may want to re-read the background on the Dietary Guidelines contained in Chapter 1.

As we saw in Chapter 1, the Dietary Guidelines call for moderation and balance. They also stress the importance of eating a variety of foods, because no one food or group of foods can give us everything we need for a healthy diet.

It's important to remember that a healthy diet applies to a pattern of foods consumed over several days, not to single meals or foods. In fact, even foods of lower nutritional value can be part of a healthy diet when served in moderation, but menu planners should monitor the amount of these foods and how often they are served.

Serving meals that reflect the Dietary Guidelines is a great way to show children what it means to eat for good health!

What do the Dietary Guidelines recommend?

Nutrition and Your Health: Dietary Guidelines for Americans **contains seven core recommendations. These are:**

1. **Eat a variety of foods.**
2. **Balance the food you eat with physical activity — maintain or improve your weight.**
3. **Choose a diet with plenty of grain products, vegetables, and fruits.**
4. **Choose a diet low in fat, saturated fat, and cholesterol.**
5. **Choose a diet moderate in sugars.**
6. **Choose a diet moderate in salt and sodium.**
7. **If you drink alcoholic beverages, do so in moderation.**

Putting the Dietary Guidelines to Work ...

WHEN PLANNING BREAKFAST

Here are some tips for applying the Dietary Guidelines for Americans as you plan breakfast. We'll look at five Guidelines in detail — 1, 3, 4, 5, 6. For each of these, you will find a variety of suggestions. You probably have many ideas of your own to add to these!

For easy reference, foods are listed by the components used with Food-Based Menu Planning, such as "Meat/Meat Alternate." However, schools using Nutrient-Based Menu Planning systems will also find these tips helpful.

DIETARY GUIDELINE #1. *Eat a variety of foods.*

Meat or Meat Alternates

Use a variety of meat or meat alternates, such as eggs, turkey sausage, ham, lowfat cheese, yogurt, peanut butter, and refried beans.

Serve eggs alone or in combination with different meats or cheeses, and prepare them in a variety of ways. In addition to scrambled or hard-cooked eggs, you might try preparing omelets, egg muffin sandwiches, breakfast burritos, or French toast.

Grains and Breads

Use a variety of bread products such as toast, biscuits, muffins, pancakes, bagels, cereals, tortillas, and breakfast sandwiches. (For more information on Grains/Breads, see Appendix 4, *Grains/Breads Instruction.*)

Use a variety of hot and cold cereals. Look for cereals that supply fiber and contain moderate amounts of sugar and salt.

Include several whole-grain cereals and breads each week.

Juice, Fruit, and Vegetable

Offer a variety of fruits and vegetables in various forms — fresh, canned, frozen, and dried.

Offer a variety of full-strength fruit or vegetable juices such as: apple, grape, pineapple-orange, pineapple-grapefruit, orange, and tomato.

Include foods high in vitamin A two to three times a week. Include vitamin C-rich foods daily.

Milk

Offer lowfat and fat-free milk as a beverage and/or on cereal.

Flavored milk is very acceptable in nonfat and lowfat versions, but test student acceptance before offering with cereal.

DIETARY GUIDELINE #2. *Balance the food you eat with physical activity — maintain or improve your weight.*

While there are no specific menu planning tips for this Guideline, it contains valuable advice. For more information, see Chapter 1.

DIETARY GUIDELINE #3. *Choose a diet with plenty of grain products, vegetables, and fruits.*

Grains and Breads

Offer more choices of whole-grain breads and cereals in the menu cycle. Wheat, corn, rice, oats, and rye are the major cereal grains. By offering these more frequently, you will be giving students additional opportunities to learn to like them.

Buy or make lowfat quick breads, muffins, and pancakes with a percentage of whole grains or whole-grain flours.

Select whole-grain or enriched grain products and cereals.

Make French toast and breakfast sandwiches with whole-wheat bread.

What are some common grains?

Five common grains — wheat, corn, oats, rice, and rye — are listed below, along with some of the forms in which you might buy or use them. Also listed are the names of four other grains you might try using.

Wheat
Whole wheat
Bulgur (cracked wheat)
Wheat Berries

Corn
Corn meal
Corn tortillas
Corn tortilla chips
Corn tortilla shells

Rice
Brown rice
Wild rice

Oats
Rolled Oats
Oat meal
Oat flour

Rye
Rye flakes
Rye flour

Other grains
Amaranth
Barley
Millet
Quinoa

JUICE, FRUIT, AND VEGETABLE

Offer a variety of fruits.

Offer fruit as a topping on cereal. Good choices might include: bananas, canned peaches, fresh strawberries, or raisins.

Offer fruit as a topping on pancakes and waffles. Cinnamon applesauce or frozen strawberries are two student favorites.

Add fruit to baked products. Pumpkin raisin bread, blueberry-banana oatmeal bread, carrot muffins, zucchini nut bread, and cinnamon raisin rolls are a few examples.

Offer fruits high in dietary fiber. See the screened box on page 105 to compare the dietary fiber in common fruits.

Which fruits are high in fiber?

As you can see from this list, some fruits are higher in fiber than others. In addition, a particular fruit may have lots of fiber in one form — for example, fresh with skin — and practically none in another form, such as juice. Compare below the amount of fiber in a fresh apple, applesauce, canned apple slices, and apple juice.



Fruit	*Portion Size*	*Dietary Fiber (in grams)*
Apple with skin	1 medium	3.0
Apple juice	1/2 cup	0
Applesauce	1/2 cup	1.5
Apple slices, canned	1/2 cup	1.9
Cantaloupe	1/2 cup	0.65
Grapes	1/2 cup	0.6
Kiwi	1 medium	2.6
Orange	1 medium	3.2
Orange juice	1/2 cup	0
Peaches, canned	1/2 cup	1.6
Peaches, dried	5	5.3
Peaches, frozen	1/2 cup	2.2
Peach with skin	1 medium	3.0
Pear with skin	1 medium	4.3
Pear, canned	1 half	1.2
Pineapple, canned	1/2 cup	1.5
Pineapple juice	1/2 cup	0
Raisins	1/4 cup	1.5
Strawberries	1/2 cup	1.7
Strawberries, frozen	1/2 cup	2.2
Watermelon	1/2 cup	0.4

DIETARY GUIDELINE #4. *Choose a diet low in fat, saturated fat, and cholesterol.*

MEAT OR MEAT ALTERNATES

To lower the weekly fat and saturated fat content, try alternating main dishes containing eggs and meat with ones that include grains, vegetables, and/or fruit.

Purchase meat and meat alternate products in which fat has been reduced.

Offer cooked dry beans or canned beans in main dishes like breakfast burritos.

Drain all meat after frying or baking. Pat with paper towels.

GRAINS AND BREADS

Offer lowfat grain products such as bagels, pancakes, and lowfat breakfast bars.

Substitute English muffins for biscuits to lower the fat content of breakfast sandwiches.

To lower saturated fat, cut the fat in recipes by 1/4 or 1/3 without losing the great taste. (See pages 166 to 168 for suggestions on how to retain quality and acceptability.)

Use vegetable oil or fruit purees instead of butter, lard, or shortening.

Use a non-stick cooking spray to grease baking pans.

Offer honey or jelly instead of butter as a spread.

Make or buy lowfat baking mixes.



Juice, Fruit, and Vegetable

Use non-stick cooking spray when sauteing or baking potatoes.

Prepare fruits and vegetables used in recipes without adding fat.

DIETARY GUIDELINE #5. *Choose a diet moderate in sugars.*

Grains and Breads

Offer a variety of dry cereals.

Add raisins as a topping on dry and cooked cereals.

Use spices such as cinnamon, nutmeg, and cloves to flavor foods without using sugar.



Juice, Fruit, and Vegetable

Use seasonal fresh fruits and vegetables when possible.

Select frozen fruits or fruits canned in fruit juices or light syrup instead of heavy syrups. These will be sweet, so there's no need to add extra sugar.

Consider serving dried fruits for variety.

DIETARY GUIDELINE #6. *Choose a diet moderate in salt and sodium.*

Meat or Meat Alternates

Read food labels carefully for sodium content.

Substitute herb blends for salt in breakfast casseroles. (See recipes in Chapter 6.)

Putting the Dietary Guidelines to Work ...

WHEN PLANNING LUNCH

Here are some tips to help you use the Dietary Guidelines as you plan lunch. As we did for breakfast, we'll look at five Guidelines in detail — 1, 3, 4, 5, 6. For each, there are a variety of suggestions. You will probably find that many of the suggestions work for both breakfast *and* lunch.

This time the information is organized under these headings: Entrees, Grains and Breads, Vegetables and Fruits, and Milk. The suggestions will be helpful to schools using either Food-Based Menu Planning or Nutrient-Based Menu Planning.

DIETARY GUIDELINE #1. *Eat a variety of foods.*

ENTREES

Plan and serve a different meat or meat alternate (or combination of meat or meat alternates) each day of the week.

Offer a variety of menu choices — vegetarian as well as meat entrees.

Try a deli sandwich bar, a pasta bar, or a taco bar.

Add an entree salad or salad bar as a choice. Consider offering pre-plated fruit or vegetable salads with cottage cheese, yogurt, or other meat/meat alternates. These can be a quick-serve entree.

GRAINS AND BREADS

Offer both whole-grain and enriched breads or bread products.

Include a variety of enriched rice, macaroni, noodles and other pasta products in entrees and side dishes. Consider serving brown rice as well as white rice.

Offer loaf breads or hot breads such as rolls, sandwich buns, muffins, biscuits, or cornbread as often as possible.

Serve Spanish rice with tacos or burritos.

Offer whole-wheat crackers or cornbread with chili.

Use whole-grain flours to enhance flavors.

Vegetables and Fruits

Serve seasonal fresh fruits whenever possible.

Offer different combinations of two or more servings of vegetables and fruits each day.

Add variety by using all forms of vegetables and fruits — fresh, canned, frozen, and dried.

Offer a salad bar or potato bar.

Milk

Offer a variety of lowfat and fat-free milk choices.

DIETARY GUIDELINE #2. *Balance the food you eat with physical activity — maintain or improve your weight.*

While there are no specific menu planning tips for this Guideline, it contains valuable advice. For more information, see Chapter 1.

DIETARY GUIDELINE #3. *Choose a diet with plenty of grain products, vegetables, and fruits.*

Entrees

Try offering vegetarian baked beans or other vegetarian entrees for variety.

Use green peppers, mushrooms, zucchini and onions as pizza toppings; add spinach or broccoli to lasagna.

Serve submarine sandwiches on whole-wheat rolls.

Offer a variety of hot and cold pasta salads.

Include kidney beans and chickpeas (garbanzo beans) on salad bars.

Increase proportion of grains to other ingredients. For example, serve a thicker pizza crust.

Add grains — such as pre-cooked rice and oats — to ground beef in meat loaf and similar casseroles. Use bulgur or barley to thicken soups.

GRAINS AND BREADS

Use rice, noodles, oats, cornmeal or bulgur in main dishes or in side dishes such as salads, hot grains, and desserts.

Offer quick breads, crackers, or cookies made with whole grains or whole-grain flours, or a combination of whole-grain and all-purpose flours.

Offer sandwiches with one slice whole-wheat bread and one slice white bread.

VEGETABLES AND FRUITS

Add fresh or dried fruits to canned fruits.

Offer high-fiber vegetables such as cooked dry beans, broccoli, tomatoes, leafy greens, potatoes with skin, and carrots.

Serve raw vegetable salads. Team fruits or vegetables with yogurt, cottage cheese, or tuna salad.

Increase the serving size of vegetables and fruits.

Serve fruits and vegetables as finger foods, or try combining two or three fruits or vegetables to contrast colors and textures (carrot and celery sticks, peach slices and grapes). Serve colorful fruit or vegetable cups often.

Cut fruits and vegetables into various shapes, such as kiwi wedges and carrot coins.



Offer a choice of two fruits or vegetables to let students have something they like to eat.

Offer whole or cut-up fresh fruits higher in fiber such as those with edible skins — apples, pears, nectarines, peaches — and those with edible seeds such as berries and bananas.

Add fresh spinach to salad greens on the salad bar. Broccoli and cauliflower florets, grated carrots, sliced green peppers, corn, and tomatoes are all popular.

Season vegetables with herbs for taste appeal. See Chapter 6 for suggestions.

DIETARY GUIDELINE #4. *Choose a diet low in fat, saturated fat, and cholesterol.*

Entrees

Offer lean meats, fish, poultry, or vegetable proteins two to three times per week.

Choose entrees that can be prepared without added fat. Bake instead of fry.

When planning to serve pre-cooked breaded meats, fish, or poultry, check fat content and select those products that are lower in fat.

Offer turkey, water-packed tuna, lowfat cottage cheese or yogurt with pre-plated vegetable or fruit salads.

Serve bean-based entrees, such as bean burritos, tostadas, and chili.

Offer lower fat lunch meats.

Enhance flavor with lowfat gravies and sauces.

Use part-skim mozzarella cheese and lowfat cottage or ricotta cheese in recipes listing cheese as an ingredient.

Grains and Breads

Serve jam, jelly, or honey instead of butter or margarine on breads and rolls.

Serve a variety of lowfat grain products — noodles, brown rice, barley, and bulgur — prepared with little or no added fat.

Use moderate amounts of high-fat condiments like mayonnaise. Instead, offer or use lowfat mayonnaise, mustard, catsup, and vegetable relishes, such as salsa.

Vegetables and Fruits

Offer reduced-fat or nonfat salad dressings.

Offer baked French fries or seasoned baked potato wedges instead of deep-fried French fries.

Steam, simmer, or bake vegetables without adding butter.

Season vegetables with herbs, spices, salsa, and lemon juice.

Serve fruit for dessert.

Substitute plain lowfat or nonfat yogurt for part or all of the mayonnaise or creamy salad dressings in salads.

Serve fresh vegetable strips with lowfat yogurt dip, salsa, or fat-free salad dressing.

Add salsas for fresh flavor...and less fat:

By substituting salsa for sauces that are higher in fat, you can cut back on fat and sodium. Compare:

SAUCE (1/4 cup)	FAT (grams)	CALORIES	SODIUM (milligrams)
Salsa	1 g	30 calories	70 mg
Basic white sauce	6 g	76 calories	211 mg
Cheese	9 g	118 calories	252 mg

DIETARY GUIDELINE #5. *Choose a diet moderate in sugars.*

Offer grain-based desserts made with whole grains or whole-grain flour. Add fruits, vegetables, and nuts for added flavor and texture.

Do not add sugar to vegetables such as stewed tomatoes, corn, or green beans.

Serve fruits packed in light syrup or fruit juice. Do not add sugar.

Use fresh or frozen fruit desserts.

Modify dessert recipes to reduce sugar without compromising quality.

DIETARY GUIDELINE #6. *Choose a diet moderate in salt and sodium.*

When serving ready-made foods such as soups, meats and main dishes, check the sodium content and select those lower in sodium.

Choose entrees that use herbs and spices in place of part of the salt.

Offer *only in moderation* salted snacks such as crackers, pretzels, or nuts.

Limit salty condiments such as mustard, catsup, relish, and salad dressings.

Use herbs and spices to flavor vegetables.

Alternate fresh vegetables with canned and frozen vegetables when menu planning.

Serve more fresh vegetables and fruits, which are naturally low in sodium.

Offer salt-free seasonings as an alternative to salt. For example, mix herbs and put into marked shakers on serving line for self-serve by students.

How much sodium does a food contain?

Processing can make a big difference. Compare the sodium content (in milligrams) of four common vegetables in three forms — fresh, frozen, and canned:

Vegetable (1/2 cup)	Fresh	Frozen	Canned
Carrots	25 mg	43 mg	176 mg
Corn	10 mg	14 mg	285 mg
Green Beans	2 mg	9 mg	175 mg
Peas	3 mg	70 mg	212 mg



USING THE NUTRIENT STANDARDS AS PLANNING TOOLS

As you develop your breakfast and lunch menus, think of the nutrient standards as planning tools. Use them as guideposts to help select and prepare foods. Use them to market your product: Tell parents and students school meals are the best deal in town for nutrition as well as taste!

In Chapters 1 and 2, we looked at the nutrient standards — what they are and why they are such an important part of the *School Meals Initiative for Healthy Children.*

- We saw that to meet the standards, schools will need to achieve certain target levels for: calories (also called Energy Allowances), protein, calcium, iron, vitamin A, vitamin C, calories from fat, and calories from saturated fat.

- We also saw that while the nutrient standards do not set specific target levels for cholesterol, sodium, and dietary fiber, these are also important considerations. You will want to work to *reduce* cholesterol and sodium and *increase* dietary fiber.

Let's take a closer look at the key nutrients and dietary components singled out in the nutrient standards. What do they contribute to good health? What are some common food sources?

Take a moment to review the charts on pages 23 through 26 for Food-Based Menu Planning or pages 65 through 68 for Nutrient-Based Menu Planning. These show you the school week averages you will be working to achieve for various age/grade groups.

As you look over the charts, remember: The figures shown reflect levels in effect when this menu planner was printed in 1998. Specific levels may change from time to time as the Recommended Dietary Allowances (RDA) and the Dietary Guidelines for Americans are updated to reflect new nutrition knowledge. What is important in this section is understanding how to use the target levels as guides for planning healthy meals.

CALORIES

What are the target levels? The nutrient standards set age-appropriate target levels for calories. Here are a few examples using the Enhanced Food-Based Menu Planning system for lunch (see chart on page 24):

> *If you are planning lunch for Grades K-6, you will aim to meet a target level of 664 calories for Energy Allowances. In other words, when averaged over the school week, a lunch for this age group should provide at least 664 calories. If you are planning lunch for Grades 7-12, your target level will be considerably higher — 825 calories per lunch when averaged over the school week.*

As we saw in Chapter 1, it's important to be sure you maintain adequate levels of calories, especially as you lose calories from reducing fat. If you are having trouble providing adequate levels of calories, see the screened box below for some tips.

Here are some menu planning tips for increasing calories:

1. **When planning meals, consider substituting menu items, adjusting serving sizes, or adding condiments.**

   Substitute higher calorie menu items for lower calorie menu items, keeping in mind all other nutrient standards (such as target goals for calories from fat).

   Increase serving sizes where appropriate and affordable — for example, offer larger serving sizes and/or extra servings of bread and rolls.

   Add menu items, considering all other nutrient standards and costs of the items.

   Add condiments, such as honey, jams, jellies, catsup, lowfat gravies or sauces, fruit toppings, lowfat whipped topping, where appropriate.

2. **When cooking, substitute or add ingredients.**

   Use reconstituted nonfat dry (NFD) or nonfat fluid milk when recipe calls for "water or milk." Use juice in place of water in gelatins.

   Add dried, canned, frozen, or fresh fruit to bread/cake/muffin recipes. Add corn to cornbread/muffin recipes.

3. **Keeping students' preferences in mind, modify recipes and introduce new combinations of foods.**

   To salads or salad bar selections, try adding croutons, lowfat or nonfat cheese, red or black beans, peas, Oriental noodles.

   Add or increase amount of foods like pasta, rice, potatoes, corn, and peas in stews, soups, and casseroles.

   Increase amount of breading on breaded items. Increase amount of bread in sandwiches, and pizza.

Add sauces or toppings to menu items. For example, try honey-mustard sauce on chicken, lowfat or nonfat sour cream on Mexican entrees.

With baked potatoes, offer toppings like vegetable chili or low-fat cheese, or lowfat or nonfat sour cream. Add beans to tacos, burritos, chili, and other Mexican dishes.

4. **Be creative with desserts.**

   Offer lowfat, high-carbohydrate desserts more frequently, including ones that contain fruits, vegetables, and/or whole grains.

   Consider serving angel food cake as well as lower fat versions of richer tasting cakes.

   Top fruited gelatin with nonfat yogurt. Consider serving lowfat frozen yogurt, ice milk, sherbet, and nonfat milk pudding.

PROTEIN

What are the target levels? The nutrient standards set target levels for grams (g) of protein. Here's another example from the chart on page 24:

> *If you are planning lunch for Grades K-6 with the Enhanced system, your goal will be to provide at least 10 grams of protein per lunch when averaged over the school week. For Grades 7-12, your target level for a school week average will be 16 grams per lunch.*

What does protein contribute to good health? While we use the word "protein," there are actually many different proteins. Proteins build and repair body tissues. They help antibodies fight infection. And they supply energy (4 calories per gram) if more protein is consumed than needed to build and repair body tissues.

What are food sources for protein? Meat, poultry, fish, eggs, milk, yogurt, cheese, dry beans, dry peas, nuts, nut butters.

CALCIUM

What are the target levels? The nutrient standards set target levels for milligrams (mg) of calcium. Looking at the chart on page 24, you will see:

> *If you are planning lunch for Grades K-6 with the Enhanced system, you will aim to provide at least 286 milligrams of calcium per lunch when averaged over the school week. For Grades 7-12, your target level for a school week average will be 400 milligrams per lunch.*

What does calcium contribute to good health? Calcium is needed for healthy bones. It also helps in blood clotting and aids in muscle contraction and normal nerve functions.

What foods are good sources of calcium?

- **Best sources include:** Milk (nonfat, lowfat, and whole) and milk products such as cheese, yogurt, cottage cheese, ice milk. Puddings made with milk can also provide substantial amounts of calcium.
- **Other sources include:** Almonds, dark green leafy vegetables (such as kale and collards), oysters, canned sardines and salmon with bones, tofu prepared with calcium salts.

IRON

What are the target levels? The nutrient standards set target levels for milligrams (mg) of iron. Looking at the chart on page 24, you will see:

> *If you are planning lunch for Grades K-6 with the Enhanced system, you will aim to provide at least 3.5 milligrams of iron per lunch when averaged over the school week. For Grades 7-12, your target level for a school week average will be 4.5 milligrams per lunch.*

What does iron contribute to good health? Most important, iron combines with protein in the blood to form hemoglobin.

What foods are sources for iron? For easy reference, several foods are grouped below under: Meat/Meat Alternates, Grains/Breads, Vegetables, and Fruits.

- **Meat/Meat Alternates:**
  The following provide approximately 1 milligram of iron per 2-ounce serving:
  Dry beans and peas, eggs, meats (liver and organ meats provide greatest amount of iron), peanut butter, shellfish, turkey.
- **Grains/Breads:**
  The following provide approximately .6 milligram of iron per serving:
  Enriched or whole-grain bread and grain products, such as: 1 slice of bread; 1/2 cup grain (couscous, for example) or rice; 1/2 cup cooked cereal; 3/4 cup or 1 ounce ready-to-eat cereal.
- **Vegetables:**
  The following provide approximately .3 milligram of iron per 1/4 cup serving:
  Asparagus; beans (green, wax, lima); bean sprouts; beets (canned); black-eyed peas; broccoli; Brussels sprouts; parsnips; green peas; potatoes (canned); tomato juice, paste, puree, sauce; dark green leafy vegetables (beet greens, chard, collards, kale, mustard greens, spinach, turnip greens); vegetable juice (canned).
- **Fruits:**
  The following provide approximately .3 milligram of iron per 1/4 cup serving:
  Apricots (canned); cherries (canned); dried fruits (apples, apricots, dates, figs, peaches, prunes, raisins); grapes (canned).

VITAMIN A

What are the target levels? The nutrient standards set target levels for Retinol Equivalents (RE) of vitamin A. Looking at the chart on page 24, you will see:

> *If you are planning lunch for Grades K-6 with the Enhanced system, you will aim to provide at least 224 RE of vitamin A when averaged over the school week. For Grades 7-12, your target level for a school week average will be 300 RE per lunch.*

What does vitamin A contribute to good health? Vitamin A helps keep eyes healthy and able to adjust to dim light. It helps keep skin healthy. It helps keep the lining of the mouth, nose, throat and digestive tract healthy and resistant to infection. It promotes growth.

What foods are sources for vitamin A? Vitamin A-fortified milk (whole, nonfat, lowfat) is a good source. Other foods rich in vitamin A include:

- **Best sources:**
  Vegetables: Beet greens, carrots, Swiss chard, red chili peppers, collards, dandelion greens, kale, mustard greens, peas and carrots, sweet red peppers, spinach, winter squash (acorn, butternut, Hubbard), pumpkin, sweet potatoes, turnip greens.
  Fruits: Mangoes.
- **Good sources:**
  Vegetables: Broccoli, chicory greens.
  Fruits: Apricots, cantaloupe, papayas, purple plums (canned).
- **Other sources:**
  Vegetables: Green asparagus, green chili peppers (fresh), endive, escarole, tomatoes, tomato juice or reconstituted paste or puree.
  Fruits: Red sour cherries, nectarines, peaches (not canned), prunes.

VITAMIN C (Ascorbic Acid)

What are the target levels? The nutrient standards set target levels for milligrams (mg) of vitamin C. Looking at the chart on page 24, you will see:

> *If you are planning lunch for Grades K-6 with the Enhanced system, you will aim to provide at least 15 milligrams of vitamin C when averaged over the school week. For Grades 7-12, your target level for a school week average will be 18 milligrams per lunch.*

What does vitamin C contribute to good health? Vitamin C helps strengthen blood vessels and hastens healing of wounds and bones. It increases resistance to infections, and it helps the body absorb iron in the diet.

What foods are sources for vitamin C?

- **Best sources: (1/4 cup = 25 milligrams or more)**
  Vegetables: Broccoli, Brussels sprouts, sweet red and green peppers, red and green chili peppers.
  Fruits: Oranges, orange juice, papayas, guavas, kiwi.
- **Good sources: (1/4 cup = 15 to 25 milligrams or more)**
  Vegetables: Cauliflower, collards, kale, kohlrabi, mustard greens, watercress.
  Fruits: Grapefruit, grapefruit juice, grapefruit/orange juice, kumquats, mangoes, pineapple juice (canned/vitamin C restored), strawberries, tangerine juice, tangerines.
- **Other sources: (1/4 cup = 8 to 15 milligrams or more)**
  Vegetables: Asparagus, cabbage, dandelion greens, okra, potatoes (baked, boiled, or steamed), potatoes (reconstituted instant mashed/vitamin C restored), sauerkraut, spinach, sweet potatoes (not canned in syrup), tomatoes, tomato juice or reconstituted paste or puree, turnip greens, turnips.
  Fruits: Cantaloupe, honeydew melon, raspberries, tangelos.

CALORIES FROM FAT AND FROM SATURATED FAT

What are the target levels? The nutrient standards set target levels for: (1) calories from fat; and (2) calories from *saturated* fat.

- No more than 30 percent of total calories should come from fat.
- Less than 10 percent of total calories should come from saturated fat. (Keep in mind that the percent of calories from saturated fat is part of the percent of calories from total fat.)

Here's an example: We'll start by looking at the chart on page 24 to find the calorie goal for lunch for a particular age/grade group. We'll then determine the maximum number of these calories that should come from fat and from saturated fat when averaged over the school week.

STEP 1 Determine the maximum number of calories that should come from overall fat.

We're planning lunch for Grades K-6 using the Enhanced system. The chart shows we should provide a school week average of at least 664 calories per lunch.

To determine the target level for fat, we'll multiply 664 calories by 30 percent (664 x .30). The result: When averaged over the school week, no more than 199 calories per lunch should come from fat for this age/grade group.

STEP 2 DETERMINE THE MAXIMUM NUMBER OF CALORIES THAT SHOULD COME FROM SATURATED FAT:

To determine the target level for saturated fat, we'll multiply this 664 calories by 10 percent (664 x .10). The result: When averaged over the school week, no more than 66 calories per lunch should come from saturated fat for this age/grade group.

STEP 3 CONSIDER TOTAL FAT AND SATURATED FAT TOGETHER:

In this example, we've seen that no more than 199 calories should come from fat of any type. Of these 199 calories from fat, no more than 66 calories should come from saturated fat.

While the nutrient standards do not set specific target levels for cholesterol, you will want to work to lower cholesterol. In the screened box below and on page 121 are some ideas for lowering fat, saturated fat, and cholesterol.

Here are some ideas for lowering fat, saturated fat, and cholesterol:

What can you do to lower fat, saturated fat, and cholesterol? You will find lots of tips in Chapter 6. For starters, however, review the abbreviated list below. As the list shows, serving lower fat meals *begins* with the decisions you will make during menu planning.

Included are ideas for planning menus and purchasing, preparing, and serving food. This is not a complete list — look it over and think about what you might add. (An asterisk (*) next to an idea indicates it will decrease *saturated* fat.)

Menu Planning

- Offer a "light meal option" each day.
- Use angel food or sponge cakes which contain little fat.*
- Substitute lean ham for bacon or sausage.*
- Make pizza with lean ham instead of sausage or pepperoni.*
- Serve grilled chicken instead of deep-fried chicken patties.
- Offer mustard, ketchup and/or lowfat mayonnaise with sandwiches.
- Offer hot sauce with greens instead of seasoning with butter.*

Purchasing

- Purchase lowfat and/or fat-free milk and other nonfat or lowfat dairy products.
- Review the prepared entree products you purchase to determine if lower fat products would be acceptable and affordable.
- Find lower fat breakfast products or menu items to offer more frequently instead of higher fat items. For example: lower fat breakfast pizza, fruit muffins, or pancakes; lowfat cinnamon rolls with light glaze or powdered sugar dusting.*
- Purchase oven-ready French fries instead of fries for deep-fat frying.
- Purchase ground chicken or turkey (without skin) to mix with lean ground beef.*
- Purchase leaner meats (such as ground beef with no more than 15% fat).*
- Purchase tuna packed in water instead of oil.
- Purchase reduced-fat processed meats, such as reduced-fat frankfurters and deli-meats.*
- Purchase some lower fat salad dressings. Try newest versions of lowfat and fat-free mayonnaise, especially for use in salads or salad dressing mixes.
- Purchase lower fat variety breads (such as bagels, pita bread, corn tortillas, English muffins, etc.) to offer more frequently instead of higher fat grain products such as croissants, doughnuts, and sweet rolls.*
- Revise specifications to prohibit *saturated* vegetable oils, such as coconut oil, palm oil, palm kernel oil, and hydrogenated shortening or stick-type margarine.*
- Purchase soft margarine which is lower in saturated fat than stick margarine.*

Preparing and Serving

- Use *only* enough salad dressing to lightly coat salad. Excess dressing can add unnecessary fat.
- Where appropriate for the finished product, steam meats and vegetables instead of sauteing.
- Use non-stick cooking spray in place of oil or shortening for braising and sauteing.*
- To prevent baked products from sticking, use non-stick cooking spray or parchment paper, as appropriate.
- Use nonfat fluid or reconstituted nonfat dry milk instead of whole milk in cooking.*
- Reduce the amount of cheese on sandwiches (for example, 1/2 ounce instead of 1 ounce) and increase the amount of *lean* meat.*
- Use part-skim mozzarella cheese in pizza, salad bar offerings, and tacos.*
- When not needed to meet Meat/Meat Alternate requirements, reduce the amount of cheese in recipes. Boost cheese flavor with enhancers such as dry mustard and lemon juice. Make casserole toppings by reducing cheese and combining with dry bread crumbs and herbs.*
- Thicken soups with instant potato flakes instead of cream sauce. To thicken gravies and sauces without adding fat, mix cornstarch with a small amount of cold liquid to make a slurry.



SAMPLE LUNCH MENUS FOR A TYPICAL WEEK

EXAMPLE #1: USING TRADITIONAL FOOD-BASED MENU PLANNING

Here are 1 week's lunches planned with the Traditional Food-Based Menu Planning system. Because of the ages of the students to be served, the menu planners have used the Traditional meal pattern for *Grades 4-12*.

For every day, they have listed what items are planned and what each contributes to meeting meal pattern requirements. They've used the following abbreviations for the required food components:

M/MA	**=**	**Meat/Meat Alternate**
G/B	**=**	**Grains/Breads**
F/V	**=**	**Fruit/Vegetable**
FL MK	**=**	**Fluid Milk (served as a beverage)**

After Friday's menu, they have totalled and noted the number of Grains/Breads offered for the week. This is because there are weekly as well as daily requirements for Grains/Breads with Food-Based Menu Planning. For additional information on requirements and meal patterns for the Traditional system, see Chapter 2.

MONDAY	Meal Pattern Contribution
Beef Steak on Multi-Grain Bun with Reduced-Fat Mayonnaise	2 oz M/MA + 2 G/B
- OR -	
Breaded Chicken Nuggets with Honey BBQ Sauce with Whole-Wheat Roll/Margarine	2 oz M/MA + 2 G/B
Oven-Fried Potato Wedges (with Catsup as condiment)	1/2 cup F/V
Chilled Applesauce	1/2 cup F/V
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

TUESDAY	Meal Pattern Contribution
Chicken Stir-Fry with Chinese Noodles and Steamed Rice	2oz M/MA + 2 G/B + 1/4 cup F/V
- OR -	
BBQ Beef on Whole-Wheat Bun and with Cole Slaw	2 oz M/MA + 2 G/B + 1/4 cup F/V
Garden Peas	1/4 cup F/V
Chilled Pineapple Tidbits	1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK
Gingerbread with Whipped Topping	

WEDNESDAY	Meal Pattern Contribution
Tuna Salad on Bun	2 oz M/MA + 2 G/B
- OR -	
Vegetable Lasagna with Italian Bread/Margarine	2 oz M/MA + 2 G/B
Lettuce and Tomato	1/4 cup F/V
Carrot Sticks	1/4 cup F/V
Fresh Grapes	1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

THURSDAY	Meal Pattern Contribution
Turkey/Cheese Club Bagel with Lettuce/Tomato/ Reduced-Fat Mayonnaise/Mustard	2 oz M/MA + 2 G/B + 1/4 cup F/V
- OR -	
Sausage Pizza with Bread Stick and Marinara Sauce	2 oz M/MA + 2 G/B + 1/4 cup F/V
Golden Corn	1/4 cup F/V
Fresh Orange Wedges	1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

FRIDAY	Meal Pattern Contribution
Honey Lemon Chicken with Brown Rice Pilaf - OR - Chili Beans/Cheese with Dinner Roll/Margarine	2 oz M/MA + 1 G/B 2 oz M/MA + 1 G/B
Fresh Broccoli and Cauliflower Pieces with Ranch Dip Green Beans Peach Half	1/4 cup F/V 1/4 cup F/V 1/4 cup F/V
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK
Whole-Wheat Sugar Cookie	

Total number of Grains/Breads offered for week = 9

EXAMPLE #2: USING ENHANCED FOOD-BASED MENU PLANNING

Here are 1 week's lunches planned with the Enhanced Food-Based Menu Planning system. In this instance, the menu planners will be serving junior high and high school students, so they have used the Enhanced meal pattern for *Grades 7-12*.

As with Example #1:

- **For each day's menu, the planners have listed what food items are planned and what each contributes to meeting meal pattern requirements.**
- **Components are abbreviated: M/MA = Meat/Meat Alternate; G/B = Grains/Breads; F/V = Fruit/Vegetable; FL MK = Fluid Milk (served as a beverage).**
- **At the end of the week, the planners have indicated the total number of Grains/Breads offered. As with Traditional Food-Based Menu Planning, the Enhanced system has weekly as well as daily requirements for Grains/Breads. For additional information on requirements and meal patterns for Enhanced Food-Based Menu Planning, see Chapter 2.**

In this example, dessert *does* count toward meeting meal pattern requirements. (This is not true with the Traditional Food-Based system.)

MONDAY	Meal Pattern Contribution
BBQ Pork on Whole-Wheat Bun with Coleslaw - OR - Chicken Stir-Fry with Chinese Noodles and Steamed Rice	2 oz M/MA + 2 G/B + 1/2 cup F/V 2 oz M/MA + 2 G/B + 1/2 cup F/V
Pineapple Tidbits	1/2 cup F/V
Gingerbread with Whipped Topping	1-1/4 G/B
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

TUESDAY	Meal Pattern Contribution
Vegetable Lasagna with Garlic Bread - OR - Sub Sandwich with Reduced-Fat Mayonnaise with Oven-Fried Potato Wedges (and Catsup as condiment)	2 oz M/MA + 2-1/4 G/B + 3/4 cup F/V 2 oz M/MA + 2-1/4 G/B + 3/4 cup F/V
Tossed Salad with Dressing	1/2 cup F/V
Oatmeal Raisin Cookie	3/4 G/B
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

WEDNESDAY	Meal Pattern Contribution
Breaded Chicken Nuggets with Honey Mustard Dip - OR - Corn Dog with Mustard	2 oz M/MA + 1/2 G/B 2 oz M/MA + 1/2 G/B
Oven Fries (with Catsup as condiment) Carrot/Celery Sticks with Ranch Dip	3/4 cup F/V 1/2 cup F/V
Whole-Wheat Roll with Margarine Chocoleana Cake	1 G/B 1 G/B
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

THURSDAY	Meal Pattern Contribution
Nachos, Chili, and Cheese with Whole-Wheat Roll	2 oz M/MA + 2 G/B
- OR -	
Fish Fillet on Bun with Tartar Sauce	2 oz M/MA + 2 G/B
Tossed Salad with Dressing	1/2 cup F/V
Orange Half	1/2 cup F/V
Steamed Rice	1 G/B
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

FRIDAY	Meal Pattern Contribution
Spaghetti with Meat Sauce	2 oz M/MA + 2 G/B
- OR -	
Honey Lemon Chicken with Steamed Rice	2 oz M/MA + 2 G/B
Steamed Broccoli	1/2 cup F/V
Fresh Peach	1/2 cup F/V
Garlic Bread	1 G/B
Peanut Butter Cookie	1/2 G/B
Milk - 1% unflavored, 1/2% chocolate, nonfat	1 - 8 oz FL MK

Total number of Grains/Breads offered for week = 15 and 1/4 servings

EXAMPLE #3: USING NSMP OR ASSISTED NSMP

Here are 1 week's lunches planned with NSMP or Assisted NSMP. The students to be served are in *Grades 7-12*.

For every day, the menu planners have listed what items are planned. They've also written appropriate portions — for example, "1 each" for a turkey club bagel, "1/2 cup" for fruit cocktail, and "1 portion" for cherry cobbler.

At the end of the menu, they've indicated the results of the computer nutrient analysis. In this case, the nutrient analysis shows the menu weekly average for the following: calcium, cholesterol, sodium, fiber, iron, calcium, vitamin A, vitamin C, protein, carbohydrates, total fat, saturated fat. It also shows percentage of calories from: protein, carbohydrates, total fat, and saturated fat.

For more information on planning meals with NSMP or Assisted NSMP, see Chapter 3. For more information on nutrient analysis and how it's done, see Chapter 5.

MONDAY	Portion
Bean Burrito with Cheese and Salsa	1 each
with Spanish Rice	1 cup
- OR -	
Turkey Club Bagel with Reduced-Fat Mayonnaise	1 each
and Lettuce and Tomato	1/8 cup
Carrot/Celery Sticks	1/4 cup
with Creamy Vegetable Dip	2 oz
Chilled Fruit Cocktail	1/2 cup
Milk - 2% unflavored, 1% chocolate, nonfat	8 oz

TUESDAY	Portion
Hamburger/Cheeseburger on Whole-Wheat Bun	1 each
with Lettuce/Tomato/Mustard/Relish	1/8 cup
and Oven-Fried Potato Wedges with Catsup	1/2 cup
- OR -	
Chicken Fajitas with Tortillas and Salsa	1 each
French-Cut Green Beans	1/2 cup
Cherry Cobbler	1 portion
Milk - 2% unflavored, 1% chocolate, nonfat	8 oz

WEDNESDAY	Portion
Vegetable Lasagna	1 portion
with Italian Bread and Margarine	1 slice
- OR -	
Deli Roast Beef Sandwich on Multi-Grain Bread	1 portion
with Reduced-Fat Mayonnaise	
and Pretzels	2 oz
Tossed Salad with Italian Dressing	1 cup
Fresh Orange	1
Milk - 2% unflavored, 1% chocolate, nonfat	8 oz

THURSDAY	Portion
Honey BBQ Chicken	2 pieces
with Tater Tots and Catsup	1/2 cup
- OR -	
Baked Potato Bar - (Chicken, Ham, Cheese with Broccoli, Carrots, and Cauliflower)	1 portion
Whole-Wheat Dinner Roll with Margarine	1 each
Seasoned Green Peas	1/2 cup
Raspberry Gelatin	1/2 cup
Milk - 2% unflavored, 1% chocolate, nonfat	8 oz

FRIDAY	Portion
Hot Turkey Ham	2 oz
and Cheese Sauce	1 oz
on Multi-Grain Bun	1 bun
with Lettuce and Tomato	1/8 cup
and Pretzels	2 oz
- OR -	
Beef Tacos with Lettuce/Tomato/Cheese and Taco Sauce	2 each
Golden Corn	1/2 cup
Fruit Juice Bars	1 each
Milk - 2% unflavored, 1% chocolate, nonfat	8 oz

NUTRIENT ANALYSIS - MENU WEEKLY AVERAGE

Cals	Mg Chol	Mg Sodm	G Fibr	Mg Iron	Mg Calc	RE Vit A	Mg Vit C	G Prot	G Carb	G T Fat	G S Fat
818	64	1250	9.19	5.92	554.15	740	42.48	36.6	112	26.78	8.33

% of Calories from Protein	17.88
% of Calories from Carbohydrates	54.76
% of Calories from Total Fat	29.43
% of Calories from Saturated Fat	9.22



EVALUATING WHAT YOU HAVE PLANNED

Evaluate your meals by asking yourself questions like the ones listed below and on the next page. The questions are in several categories: (1) foods selected; (2) staffing and equipment; (3) cost; (4) recipes and production records; (5) special considerations; (6) meal requirements. This general checklist can be used for *either* Food-Based Menu Planning or Nutrient-Based Menu Planning.

To evaluate how well you are meeting meal requirements for a particular menu planning system, use one of the three separate checklists that begin on page 131. These are listed at the bottom of page 130.

GENERAL CHECKLIST

(1) *Foods Selected:*

Do the food choices have appealing colors and textures? ..... Yes ☐ No ☐

Do the menus have foods with different shapes, sizes, and colors? ..... Yes ☐ No ☐

Do the breakfast and lunch menus complement each other? ..... Yes ☐ No ☐

Have you considered special events and promotions? ..... Yes ☐ No ☐

Have you incorporated seasonal foods and USDA commodities? ..... Yes ☐ No ☐

Have you introduced any new food items? ..... Yes ☐ No ☐

(2) *Staffing and Equipment:*

Can some preparation be done ahead? ..... Yes ☐ No ☐

Is the workload balanced among employees? ..... Yes ☐ No ☐

Can you prepare and serve meals with available equipment? ..... Yes ☐ No ☐

Are oven and surface-cooking areas adequate for items planned? ..... Yes ☐ No ☐

(3) *Cost:*

Have you considered cost? ..... Yes ☐ No ☐

Do high and low cost foods balance in menus? ..... Yes ☐ No ☐

(4) *Recipes and Production Records:*

Have you specified the standardized recipes, preparation techniques, and processed foods to be used? ..... Yes ☐ No ☐

Have you listed the projected servings for each item? ..... Yes ☐ No ☐

Are portion sizes stated in correct amounts? ..... Yes ☐ No ☐

Have you listed on the menu production record the condiments to be served? ..... Yes ☐ No ☐

(5) *Special Considerations:*

Is a vitamin C food included three to four times a week? ..... Yes ☐ No ☐

Are vitamin A foods included two to three times per week? ..... Yes ☐ No ☐

Are iron-rich foods included each day? ..... Yes ☐ No ☐

Are whole-grain products offered at least once a week? ..... Yes ☐ No ☐

Are lowfat entrees and lower in fat milk choices (such as lowfat and nonfat) offered daily? ..... Yes ☐ No ☐

Are assorted dry cereals offered at least once a week? ..... Yes ☐ No ☐

Are fresh fruits or vegetables offered on several different days? ..... Yes ☐ No ☐

(6) *Meal Requirements:*

Do menus meet the minimum requirements of the particular menu planning system you are using? ..... Yes ☐ No ☐

To answer this question, complete one of the following checklists:

- *Checklist 1 for Traditional Food-Based ..... page 131*
- *Checklist 2 for Enhanced Food-Based ..... page 133*
- *Checklist 3 for Nutrient-Based ..... page 135*



CHECKLIST 1: MEETING MEAL PATTERN REQUIREMENTS FOR TRADITIONAL FOOD-BASED MENU PLANNING

After you have selected and recorded the foods and portions you plan to serve, check your menus by answering the questions below.

BREAKFAST

1. **Have you selected the appropriate grade group (or groups) for the students you will be serving?** Yes ☐ No ☐

2. **Have you included the required food components and food items in the correct serving sizes?**

   - **Does each day's breakfast menu include *at least*:**

     8 ounces of fluid milk
     as a beverage or on cereal ..... Yes ☐ No ☐

     1/2 cup fruit or vegetable
     or full-strength fruit or vegetable juice ..... Yes ☐ No ☐

     One serving from each of the Grains/Breads
     and Meat/Meat Alternate components
     OR-
     Two servings from either Grains/Breads
     or Meat/Meat Alternate? ..... Yes ☐ No ☐

LUNCH

1. **Have you selected the appropriate grade group (or groups) for the students you will be serving?** Yes ☐ No ☐

2. **Have you included the required food components and food items in the correct serving sizes? Are you meeting minimum requirements for each of the grade groups you are serving? (See questions next page.)**

IF YOU ARE SERVING GRADES K-3:

- **Does each day's lunch menu include *at least*...**

  8 ounces fluid milk as a beverage ..... Yes ☐ No ☐
  1-1/2 ounces Meat/Meat Alternate ..... Yes ☐ No ☐
  1/2 cup Vegetables/Fruits ..... Yes ☐ No ☐
  1 serving of Grains/Breads daily ..... Yes ☐ No ☐

- **Do lunch menus for the week meet the *weekly minimum* for Grains/Breads?**

  A total of 8 servings of Grains/Breads over the week ..... Yes ☐ No ☐

IF YOU ARE SERVING GRADES 4-12:

- **Does each day's lunch menu include *at least*...**

  8 ounces fluid milk as a beverage ..... Yes ☐ No ☐
  2 ounces Meat/Meat Alternate ..... Yes ☐ No ☐
  3/4 cup Vegetables/Fruits ..... Yes ☐ No ☐
  1 serving of Grains/Breads daily ..... Yes ☐ No ☐

- **Do lunch menus for the week meet the *weekly minimum* for Grains/Breads?**

  A total of 8 servings of Grains/Breads over the week ..... Yes ☐ No ☐

IF YOU ARE ALSO USING THE RECOMMENDED (OPTIONAL) GRADE GROUP FOR GRADES 7-12:

- **Does each day's lunch menu include *at least*...**

  8 ounces fluid milk as a beverage ..... Yes ☐ No ☐
  3 ounces Meat/Meat Alternate ..... Yes ☐ No ☐
  3/4 cup Vegetables/Fruits ..... Yes ☐ No ☐
  1 serving of Grains/Breads daily ..... Yes ☐ No ☐

- **Do lunch menus for the week meet the *weekly minimum* for Grains/Breads?**

  A total of 10 servings of Grains/Breads over the week ..... Yes ☐ No ☐



CHECKLIST 2: MEETING MEAL PATTERN REQUIREMENTS FOR ENHANCED FOOD-BASED MENU PLANNING

After you have selected and recorded the foods and portions you plan to serve, check your menus using the questions below.

BREAKFAST

1. **Have you selected the appropriate grade group (or groups) for the students you will be serving?** Yes ☐ No ☐

2. **Have you included the required food components and food items in the correct serving sizes?**

   - **Does each day's breakfast menu include *at least*:**

     8 ounces of fluid milk
     as a beverage or on cereal ..... Yes ☐ No ☐

     1/2 cup fruit or vegetable
     or full-strength fruit or vegetable juice ..... Yes ☐ No ☐

     One serving from each of the Grains/Breads
     and Meat/Meat Alternate components
     OR-
     Two servings from either Grains/Breads
     or Meat/Meat Alternate? ..... Yes ☐ No ☐

LUNCH

1. **Have you selected the appropriate grade group (or groups) for the students you will be serving?** Yes ☐ No ☐

2. **Have you included the required food components and food items in the correct serving sizes? Are you meeting minimum requirements for each of the grade groups you are serving? (See questions next page.)**

IF YOU ARE SERVING GRADES K-6:

- **Does each day's lunch menu include *at least...***

  8 ounces fluid milk as a beverage ..... Yes ☐ No ☐
  2 ounces Meat/Meat Alternate ..... Yes ☐ No ☐
  3/4 cup Vegetables/Fruits ..... Yes ☐ No ☐
  1 serving of Grains/Breads daily ..... Yes ☐ No ☐

- **Do lunch menus for the week meet *weekly minimum* requirements for Grains/Breads and Vegetables/Fruits?**

  - **Grains/Breads:**
    A total of 12 servings over the week ..... Yes ☐ No ☐

  - **Vegetables/Fruits:**
    An *extra* 1/2 cup over the week ..... Yes ☐ No ☐

IF YOU ARE SERVING GRADES 7-12:

- **Does each day's lunch menu include *at least...***

  8 ounces fluid milk as a beverage ..... Yes ☐ No ☐
  2 ounces Meat/Meat Alternate ..... Yes ☐ No ☐
  1 cup Vegetables/Fruits ..... Yes ☐ No ☐
  1 serving of Grains/Breads daily ..... Yes ☐ No ☐

- **Do lunch menus for the week meet the *weekly minimum* for Grains/Breads?**

  A total of 15 servings of Grains/Breads
  over the week ..... Yes ☐ No ☐

IF YOU ARE USING THE RECOMMENDED (OPTIONAL) GRADE GROUP FOR GRADES K-3:

- **Does each day's lunch menu include *at least...***

  8 ounces fluid milk as a beverage ..... Yes ☐ No ☐
  1-1/2 ounces Meat/Meat Alternate ..... Yes ☐ No ☐
  3/4 cup Vegetables/Fruits ..... Yes ☐ No ☐
  1 serving of Grains/Breads daily ..... Yes ☐ No ☐

- **Do lunch menus for the week meet the *weekly minimum* requirement for Grains/Breads?**

  A total of 10 servings of Grains/Breads
  over the week ..... Yes ☐ No ☐



CHECKLIST 3: MEETING MEAL REQUIREMENTS FOR NSMP AND ASSISTED NSMP

After you have selected and recorded the foods and portions you plan to serve, check your menus using the questions below.

BREAKFAST

1. **Have you selected the appropriate age/grade group (or groups) for the students you will be serving?** Yes ☐ No ☐

2. **Do meals meet nutrient standards when averaged over the school week?** Yes ☐ No ☐

3. **Are at least 3 menu items offered daily?** Yes ☐ No ☐

4. **Is fluid milk as a beverage offered daily?** Yes ☐ No ☐

LUNCH

1. **Have you selected the appropriate age/grade group (or groups) for the students you will be serving?** Yes ☐ No ☐

2. **Do meals meet nutrient standards when averaged over the school week?** Yes ☐ No ☐

3. **Are at least 3 menu items, including an entree and fluid milk as a beverage, offered daily?** Yes ☐ No ☐

4. **Is fluid milk as a beverage offered daily?** Yes ☐ No ☐

CHAPTER 5

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

Nutrient Analysis: Required for Nutrient-Based; Helpful for Food-Based



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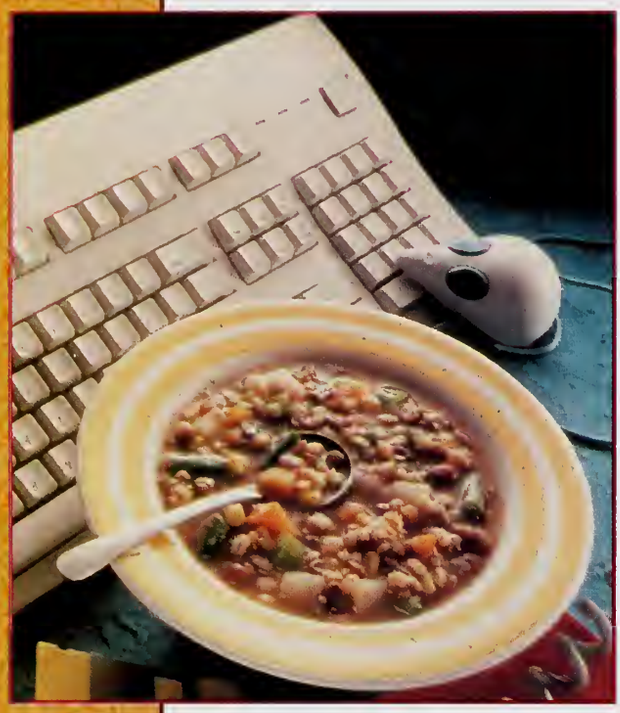
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Nutrient Analysis: Required for Nutrient-Based; Helpful for Food-Based



You have a menu idea, and you're pretty sure it's a winner. You've considered the Dietary Guidelines for Americans, and you've put to good use what you know about pleasing students in your community. You *think* it will meet the nutrition goals. But how can you be sure?

This is where nutrient analysis comes in. In this chapter, we'll look at how to make computerized nutrient analysis a part of your menu planning.

In many school districts, nutrient analysis will be the responsibility of the menu planner at the central office. If you are a manager at the local school level, you will probably not need to do this yourself. However, you may have the opportunity and may find it helpful. Here are some things to keep in mind:

- **Computerized nutrient analysis is required for NSMP and Assisted NSMP. While it's *not* required for Traditional and Enhanced Food-Based Menu Planning, it can be very helpful.**

A computerized nutrient analysis is an important step in planning meals with NSMP and Assisted NSMP. This is because meals are planned around specific nutrient goals rather than food components and meal patterns. In fact, as we've seen in earlier chapters, milk is the only required food with NSMP and Assisted NSMP.

With Food-Based Menu Planning — Traditional and Enhanced — you are *not* required to do computerized nutrient analysis. However, you may decide this is useful, especially for measuring your own progress in meeting nutrient standards. Your state agency will do a nutrient analysis for this purpose during reviews.

- **Nutrient analysis must be done using software approved by USDA. Approved software performs all of the necessary functions for an accurate analysis.**

An important part of any USDA-approved software is what is called the Child Nutrition Database (CN Database). This database is crucial to the software's capability to do the nutrient analysis as well as perform other important functions.

The CN Database includes information on reference foods commonly used in schools, USDA commodity foods, and brand-name processed foods used in schools. It also includes USDA's *Quantity Recipes for School Food Service* and *Food Buying Guide for Child Nutrition Programs*.

What about foods and recipes *not* in the CN Database? You can add these to your own local database, which you will develop by using the empty files available for this purpose in the computer software.

- **You can get this software from a variety of sources. For a list of USDA-approved software and how to obtain it, contact your state agency or use the Internet to check the Healthy School Meals Resource System website. (See Appendix 3 for information on this website.)**

To be approved, software must meet strict requirements set by USDA. One of these requirements is that the software be easy to use and come with easy-to-follow instructions. In addition, the developer of the software must have a system to update the database whenever a new release of the CN Database is available.

- **The process for doing nutrient analysis is the same for all menu planning systems. The only variables are who does the analysis and when.**

If you are using NSMP, you will do the analysis yourself. Complete instructions will come with any USDA-approved software you purchase.

If you choose Assisted NSMP, you will have help from an outside consultant or other agency (such as another school district or the state agency) who will do the nutrient analysis and plan menus based on local preferences. Even if you don't do the analysis yourself, you will want to understand it well enough to follow the findings of the reviewing state agency.

If you are working with Traditional or Enhanced Food-Based systems and you choose to do the computerized nutrient analysis, simply follow the instructions contained in the software. State agency representatives will use this software to do a computerized nutrient analysis of your meals during a nutrition review. They will do this regardless of whether you choose to do an analysis yourself.

Making Nutrient Analysis Part of Your Menu Planning —

Nutrient analysis can go smoothly when you've considered good menu planning techniques and are using one of the USDA-approved software programs. These software programs will analyze both recipes and menus.

To picture a menu planning process that includes nutrient analysis, read through the following nine steps. Then turn to pages 140 through 146 for more details.

1. Plan menu on paper.

2. Identify food products not in the Child Nutrition Database (CN Database) or your local database. Obtain nutrition information from processor, enter into computer, and save in your local database.

3. Identify recipes not in the CN Database. Standardize recipes not previously standardized. Add standardized recipes to local database. Do nutrient analysis of standardized recipes.

4. Enter specific menu planning data. This includes: site identification, date, meal type, cycle, week, grade or age group, nutrients to be analyzed, and total number of reimbursable meals projected to be served (feeding figure).

5. Enter data for each menu item (each entree, side dish, beverage, and milk) and condiment. This data includes: the food code (which identifies the food or menu item), portion size, and forecasts of projected servings.

6. Perform nutrient analysis of menu plan to obtain weekly averages. Check compliance with the nutrient standard.

7. Evaluate. Make adjustments if needed to achieve the nutrient standard.

8. Print menu plan reports.

9. If possible, provide nutrition information to students, parents, teachers.

Making Nutrient Analysis Part of Your Menu Planning — A Closer Look at What You Will Do

STEP **1** **Plan menu on paper.**

You will want to plan by the week since there are weekly nutrient requirements. If you are using cycle menus (these are recommended but not required), you will also plan by cycle. (See page 89 for benefits of cycle menus.)

STEP **2** **Identify food products not in the Child Nutrition Database (CN Database) or your local database. Obtain nutrition information from processor, enter into computer, and save in your local database.**

Built into the software as part of the CN Database will be information on many of the foods you commonly use, both USDA commodities and purchased foods.

If the menu you are planning requires purchased products that are not in the CN Database, you will need to identify them at this stage.

So that you can add these foods to your local database, you will need to obtain required nutrition information from the food processor or distributor. (See Chapter 7 for a standardized form you may find helpful.)

Add this information to your local database. The next time you use these products, the necessary information will already be in your database.

STEP 3

Identify recipes not in the CN Database. Standardize recipes not previously standardized. Add standardized recipes to local database. Do nutrient analysis of standardized recipes.

If you are using one of the *USDA Quantity Recipes for School Food Service*, it will be in the CN Database, already standardized and with nutrient analysis.

However, you are not limited to using USDA quantity recipes. Your USDA-approved software will allow you to add your own recipes to your local database and create new recipes, including those for theme bars and salad bars.

You will do this by following the software directions. You will need to standardize first, then let the computer do the nutrient analysis. (See Chapter 7 for information on how to standardize a recipe.)

You will need to create a new recipe if you plan to make ANY changes in a USDA quantity recipe. This includes, for example, changing ingredients or preparation procedures, or using alternate and optional ingredients. You will also need to create a new recipe for variations of USDA quantity recipes.

For example, USDA Recipe B-4, Baking Powder Biscuits, has a variation for Cheese Biscuits. Nutrient analysis for the main recipe, Baking Powder Biscuits, is part of the CN Database. But you will need to create a *new* recipe for Cheese Biscuits, analyze the nutrient content, and add it to the local database.

See page 142 for more details on creating a new recipe. See page 149 for how you will treat theme bars and salad bars as recipes.

Ten Steps for Creating a New Recipe



Your USDA-approved software will have the capabilities to add a recipe to the local database. You will follow the software directions. Regardless of which software you've selected, all of the following steps are needed to add a recipe to the local database.

1. Enter recipe category, code number, and name.
2. Enter recipe yield or number of servings (for example, "100 servings").
3. Enter type of serving (for example, "cups").
4. Enter serving size or description (for example, "4-oz. ladle" or "#16 scoop").
5. Look at the food ingredients listed in the database. Then select the correct food item and amount that corresponds with the food ingredient in the recipe.
6. Enter recipe ingredients and amounts using Yield Factor Method.

   The Yield Factor Method requires: (1) each recipe ingredient be entered as "ready to serve" or "cooked"; and (2) the amount of each ingredient be calculated as a yield from the "as purchased" or raw weight, using USDA's *Food Buying Guide*. For example: 1 lb. dry macaroni "as purchased" = 9.75 cups cooked; 1 lb. raw ground beef "as purchased" = .70 lb. cooked.
7. Enter preparation directions, if desired.
8. Save the recipe to the local database recipe file.
9. Complete a nutrient analysis.

   The software will calculate the following for each recipe:

   - calories
   - protein
   - total fat
   - saturated fat
   - vitamin A
   - vitamin C
   - calcium
   - iron
   - carbohydrate
   - cholesterol
   - sodium
   - dietary fiber
   - percentage of calories:
     - from carbohydrate
     - from protein
     - from fat
     - from saturated fat
10. Print the recipe, preparation instructions, and nutrient analysis. Review the printout against your recipe to ensure no errors were made in data entry.

STEP **4** **Enter specific menu planning data. This includes: site identification, date, meal type, cycle, week, grade or age group, nutrients to be analyzed, and total number of reimbursable meals projected to be served (feeding figure).**

Site identification: This refers to the school or schools for which the menu is being planned. It may be a single school or a group of schools with the same menu. For example: "Lincoln Elementary School" or "XYZ Unified School District Elementary Schools."

Date: This is the date the menu will be served. It identifies the menu for future reference.

Meal type: Specify lunch or breakfast. There are specific program requirements for each. (You may also see the words "menu type" used along with or in place of "meal type" here.)

Cycle: A cycle is a series of menus that repeats. A cycle may cover 1 to 8 or more weeks, depending on what works for the individual school or groups of schools. Cycles may be planned for a season or for a year. For example: "Fall Cycle, Number 2, Weeks 1-4"; or "Elementary Cycle, Weeks 1-5."

Week: A school week for nutrient analysis purposes is 3 to 7 consecutive days. If there are fewer than 3 consecutive days in a week, the days in that week are combined with the coming or the prior week for analysis. Most menus will be averaged over a 5-day week.

Grade or age group: You will enter the age or grade group that is appropriate for the children you will be serving with this menu. For example, if you were planning lunch for Lincoln Elementary using established grade groups with NSMP, you might enter "K-6."

It's important to select the *correct* age/grade group for your school or schools. The age/grade group is key to identifying which nutrient standard will be used as a yardstick for measuring success.

As we've seen in earlier chapters, there are different established and optional age/grade groups for the various menu planning systems. (See Chapter 2 for Traditional and Enhanced Food-Based Menu Planning, and Chapter 3 for NSMP and Assisted NSMP.)

In addition, with NSMP and Assisted NSMP you can develop new, customized age groups. When a grade or age group is added, USDA-approved software will automatically adjust the nutrient standard to fit the selected group.

Nutrients to be analyzed: Your software may offer nutrient analysis of some nutrients and dietary components that are not required. The following *are* required:

- calories
- protein
- total fat
- saturated fat
- vitamin A
- vitamin C
- calcium
- iron
- cholesterol
- sodium
- dietary fiber

Although it is not required, you should also specify carbohydrate. This will allow you to determine the percentage of calories from carbohydrate in the menu.

Feeding figure: This is the total number of reimbursable meals projected to be served. For example: "500 Breakfasts" or "1,000 Lunches."

Remember: *Only* reimbursable meals are to be included for nutrient analysis. Therefore, projected servings and total feeding figures must *not* include a la carte or adult sales.

STEP 5 **Enter data for each menu item (each entree, side dish, beverage, and milk) and condiment. This data includes: the food code (which identifies the food or menu item), portion size, and forecasts of projected servings.**

Food code: The food code is the numbers or letters assigned to each food and menu item in the CN Database or local database. For example: "1082" for 1% lowfat milk; "8020" for corn flakes cereal. You will find the food code in the computer's ingredient file.

Many software systems will also allow the menu planner to enter the name of the food or menu item. Using this name, the software will search for similar foods and allow the menu planner to select the correct item.

Portion size: You will need to specify the portion size for every food item and menu item. The portion size you enter must relate to the portion sizes available for the food or menu item in the nutrient analysis software system. For example:

- 1% lowfat milk, 8 fl. oz. or 1 cup
- corn flakes cereal, 1 oz. (weight) or 3/4 cup

Forecasts of projected servings: For each menu item, you will want to determine the number of servings you expect to produce. This information should be available from historical menu production records, but you can also use other methods to arrive at this figure.

How you will use this information to enter data into your computer will depend on whether you are doing an unweighted or a weighted analysis. (See page 148. Also see italicized note at bottom of page 146.)

STEP 6 **Perform nutrient analysis of menu plan to obtain weekly averages. Check compliance with the nutrient standard.**

To do this, you will need to specify the site number, date range, and meal type as follows:

Site number: This refers to the school or group of schools for which the menu is being planned and analyzed. Specify the site number you assigned in Step 4 above (or during an earlier menu planning session).

Date range: Specify the first day of the menu analysis week and the last day. For example: "9/14/98 - 9/18/98."

Meal type: Specify breakfast or lunch. To meet the nutrient standards, a breakfast needs to provide 1/4 of the Recommended Dietary Allowance (RDA) for required nutrients and calories; a lunch needs to provide 1/3 of the RDA for required nutrients and calories.

STEP 7 **Evaluate. Make adjustments if needed to achieve the nutrient standard.**

If the nutrient standard is not met when the menu is analyzed and averaged over a week, make changes. For example, to help meet the nutrient goal:

- Replace a food on the menu plan.
- Change portion sizes.
- Add a food to the menu plan.
- Modify a recipe, a preparation technique, or both.
- Purchase a different version of the product you originally planned to use — for example, buy a pizza that is lower in fat.

STEP 8 Print menu plan reports.

You will be printing several reports:

- Nutrient analysis.
- Menu.
- Nutritional composition of menu items.
- Missing records (for menu items with missing nutrient data).
- Menu production records that can be saved and/or used in production.

The nutrient analysis report will include both of the following: (1) nutrient analysis for each meal with comparison to the nutrient standard for the age/grade group you have selected; and (2) the weekly average compared to the nutrient standard for this selected group.

STEP 9 If possible, provide nutrition information to students, parents, teachers.

You are encouraged to make the nutrient content of meals available for your customers. Choose the best method for your school — printing information on a menu, for example, or in a brochure. See Chapter 8 for additional ideas. If you have many menu choices, you may want to select a few possible combinations to provide to students and parents.

If you would like more detailed information on doing a computerized nutrient analysis, you may want to obtain a copy of "Nutrient Analysis Protocols for the School Nutrition Program," listed in Appendix 3.

Your Nutrient Analysis Won't Be Right If You Use Incorrect Data

Entering the correct data for recipes and menus is important to the success of nutrient analysis. If the wrong foods, the wrong portion sizes, or the wrong recipes are entered, the analysis will not reflect what is planned and offered.



Some common data entry errors include...

- Selecting an incorrect food item from the database.
- Using the incorrect form of a food. For example, entering the food as raw when the item will be served cooked.
- Selecting incorrect portion sizes.
- Not entering condiments, salad dressings, and added fat.
- Not using standardized recipes.
- Leaving ingredients out of a recipe.
- Leaving menu items out of nutrient analysis. For example, omitting a bun for the hamburger.

What's the Difference Between an Unweighted and a Weighted Nutrient Analysis?

As the first chart below shows, an unweighted analysis is based on a simple average of a menu. It gives the nutrient contribution of each menu item equal importance.

As the second chart below shows, a weighted nutrient analysis gives more weight to choices that students are more likely to select, based on the menu planner's records of what his or her customers have chosen on previous occasions.

UNWEIGHTED NUTRIENT ANALYSIS

Item	Number of Servings Planned	Number of Servings for Computation	COMPUTATION	Nutrient Contribution
Pizza	200	100	100 divided by 300 =	33.3%
Baked Chicken	50	100	100 divided by 300 =	33.3%
Chef's Salad	50	100	100 divided by 300 =	33.3%
Total:	**300**	**300**		**100 %**

WEIGHTED NUTRIENT ANALYSIS

Item	Number of Servings Planned	Number of Servings for Computation	COMPUTATION	Nutrient Contribution
Pizza	200	200	200 divided by 300 =	66.6%
Baked Chicken	50	50	50 divided by 300 =	16.7%
Chef's Salad	50	50	50 divided by 300 =	16.7%
Total:	**300**	**300**		**100 %**

If You Serve Both Breakfast and Lunch, Can You Do a Combined Nutrient Analysis?

Yes. Some USDA-approved software is capable of calculating a combined nutrient analysis for breakfast and lunch. This is an option you can select from the list of functions that will appear on your computer screen.

To tell your computer to do this, follow the directions in the software. If you have completed all of the steps in "Making Nutrient Analysis Part of Your Menu Planning" (pages 140 to 146), you will have entered the necessary data.

How Will You Do Nutrient Analysis for a Theme Bar?

To do a nutrient analysis for a theme bar, you will essentially treat it as a recipe. You will begin by giving it a name (for example, "Potato Theme Bar") and will continue through the various steps for creating and saving a new recipe described on page 142.

As you go through these steps, you will enter such information as: recipe yield (number of servings), serving size, ingredients and amounts, and preparation directions. You will then save the recipe to the local database recipe file and complete the nutrient analysis.

You will need to do this for *each* of your theme bars, including salad bars. If you change the ingredients for a theme bar, you must develop a new recipe.

Theme bar recipes are treated the same as any other menu choice. In other words, they are averaged into the weekly nutrient analysis based on projected servings.

How Does Making Substitutions Affect Requirements for Nutrient Analysis?

Occasionally, you may need to make substitutions in menus you have planned. Perhaps a vendor has delivered the wrong food, or maybe the food you ordered isn't available.

No matter what the reason, remember: Substitutions *change* the nutrient content, and meals may or may not continue to meet the nutrient standard. This is also important to think about when you find yourself using leftovers.

How does making substitutions or using leftovers affect nutrient analysis? The answer depends largely on timing — how far in advance you know you will be making changes.

For example, when substitutions are needed because of an emergency, it may be impractical to revise menus and redo the analysis, especially if the emergency arises at the end of the week. However, if you know 2 weeks or more in advance, you will have time to do this.

- **When making substitutions, think in terms of a 2-week window:**

  If you know 2 weeks or more in advance: You must re-analyze the menu and meet the nutrient standard, incorporating the substituted item or items.

  If you know less than 2 weeks in advance: No re-analysis is required. However, in selecting a food to use in making the substitution, try to choose a food that will contribute similar nutrients to the meal.

- **When making substitutions on a theme bar, the same rules apply.**

  If you know 2 weeks or more in advance: You must re-analyze the menu and meet the nutrient standard, incorporating the substituted food. In addition, if you plan to make *several* substitions 2 or more weeks in advance, you should make a new theme bar recipe.

  If you know less than 2 weeks in advance: No re-analysis is required. However, in making the substitution, choose a food that will contribute similar nutrients to the meal.

- **Also use this 2-week window as a guide when you are considering incorporating leftovers into a menu:**

  If you know 2 weeks or more in advance: You must re-analyze the menu and meet the nutrient standard, incorporating the leftover food.

  If you know less than 2 weeks in advance: No re-analysis is required. However, be careful to use the leftover food in place of a food that would have contributed similar nutrients to the meal.

In addition, be sure to document substitutions and leftovers. A good way to do this is making notes on the menu production record. (See Chapter 7 for more information on recordkeeping.)

How Will You Do Nutrient Analysis for Field Trip Meals?

Mr. Brown's sixth graders are going on a field trip, and you have been asked to provide lunch for the entire class. How will you do the nutrient analysis for these meals?

You will want to keep in mind the following:

(1) Menus for field trips should be part of the menu analysis *on the day they are served*. They should be included as a separate menu choice along with the regularly scheduled menu items.

(2) The 2-week window applies. If you know you will be providing field trip meals 2 or more weeks in advance, you must include them in the nutrient analysis for that day. If you know less than 2 weeks in advance, you are not required to re-analyze the day's menu to include the field trip meals.

(3) The projected number of servings is the number of students getting the field trip meals — in this case, in Mr. Brown's class.

(4) For calculating the total number of reimbursable meals projected to be served (feeding figure), reimbursable field trip meals count the same as reimbursable meals served on a school campus.

CHAPTER 6

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

Quality Meals — Good for Your Customers and Your Staff



Chapter 6

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Quality Meals — Good for Your Customers *and* Your Staff

Once you've *planned* a healthy meal, you're off to a good start. But don't relax yet. What you and your staff do next, in the kitchen and on the serving line, is crucial.

That's because the first rule in getting students to accept healthy school meals is to *produce* quality products — breakfasts and lunches that look good, taste good, and are nutritious. This chapter offers some tips on meeting this challenge.

Your ultimate goal, of course, is providing healthy meals to satisfied customers, but chances are you will boost your employees' morale, too. A food service staff that strives for excellence every day can find great satisfaction and pride in serving meals.

Begin by Setting Quality Standards

■ **Achieving excellence starts with defining what "excellent" means.**

Work with your employees to set standards for quality, then look for ways to meet these standards every day. Training will be important. Make sure your employees understand the standards and know how to meet them.

- **Set quality standards for food.** Set standards not only for taste, but also for appearance, texture, and temperature. In doing this, consider your customers' preferences — for example, some people like their pizza crust thicker and chewier than others. Be sure to get feedback from students. Listen to their comments, watch their actions and reactions, and then try to incorporate this feedback as you work to make a more satisfactory product.

- **Use proven, standardized recipes and good quality ingredients.** Before serving a new item, involve staff in planning the procedures for preparing it. Make sure all new food items are tasted before they are served.

- **Keep quality in mind.** Check daily to be sure top quality is maintained. Post your "standards for excellence" and encourage the staff to read them often.

  You will not be able to serve quality meals if your suppliers give you inferior products. Prior to sending out bids or getting price quotations, review potential suppliers to ensure they are as concerned about quality as you are.

- **Teach your employees to use good judgment about cooking times and preparation techniques.** They'll need to know how to test for top quality by smell, sight, taste, and temperature. Photos of correctly prepared food are good teaching tools.

- **Make sure employees understand basic differences between home cooking and institutional cooking.** These include, among other things, differences in quantities, temperatures, equipment, and procedures (such as working with pre-cooked portions, and staggering cooking and holding times).

- **Emphasize the importance of food safety.** Make sure your staff understands that food safety is important at *every* step — from purchasing and receiving, to storing, handling, preparing, cooking, and serving.

  As you work to ensure quality and safety, you might find helpful these additional materials developed by USDA for school food service professionals: (1) *Serving It Safe*, a comprehensive multi-media training course on food safety; and (2) *Choice Plus*, a reference guide to purchasing foods and ingredients. These are described in more detail in Appendix 3.

Serve Quality Food

■ **Good food is the key ingredient in keeping customers satisfied and coming back for more.**

Throughout this chapter, you will find tips on preparing and serving food in ways that protect and enhance flavor. For starters, here are just a few examples:

- **Carefully select how you will prepare and hold each food.** For example, plan to cook vegetables in batches and avoid holding for more than 15 to 20 minutes before serving. This will help retain flavor, color, and nutrients. Remember, food continues to cook while it's on the serving line.

- **Don't overcook.** Accidents and mistakes happen. But if a food burns or falls short in other ways, don't make the second mistake of serving that food. As we'll see below, overcooking can also cause food to lose nutritional value.

- **Always taste before serving**. Make sure food has been prepared and seasoned correctly.
- **Serve foods at the proper temperature.** Serve hot foods hot (140°F and above) and cold foods cold (below 40°F). Proper temperatures are important for food safety as well as taste and appearance.
- **Feature freshness!** For example, serve salad greens that are crisp and green.
- **Serve eye-appealing foods.** Like adults, children as well as older students notice and are influenced by how foods look.
- **Think about the big picture.** Offer menu choices that maximize the flavor and appearance of the entire menu.

Choose "Healthy" Preparation Techniques

■ **Consider the merits of various cooking techniques and select carefully. Be careful to retain nutrients during preparation and cooking.**



There's no one "right" way to cook a particular food. However, certain techniques can increase your chances of preparing healthy meals — by helping to minimize nutrient loss, for instance, or enhancing flavor without adding a lot of fat.

For example, baking can be used to cook many foods, including meats and fish. When no fat is added, baking is a great lowfat cooking method. Baking on a rack or draining the fat after baking helps make meat, poultry, and fish even lower in fat.

Steam cooking is another no-fat-added method which is versatile and quick. It produces a high quality product without extra fat. It also minimizes nutrient loss. For example, steamed vegetables generally retain more vitamin C than boiled vegetables.

Trim the Fat!

- **Learn strategies for reducing fat, such as selecting certain oils for cooking and choosing lower fat ingredients.**







Fat is an important nutrient and sometimes an essential ingredient in cooking. But too much fat in the diet may cause serious health problems. This is why, in keeping with the Dietary Guidelines for Americans, the nutrient standards for healthy school meals include specific levels for fat.

As we've seen in earlier chapters, these nutrient standards set levels for total fat *and* saturated fat. When menus are averaged over a week:

- No more than 30 percent of calories should come from total fat.
- Less than 10 percent of calories should come from saturated fat.

Starting on page 162, we'll explore some strategies for reducing fat in school meals. We'll begin by looking at the different types of fat, such as *saturated, mono-unsaturated,* and *polyunsaturated*; and we'll see which of these are the best choices for lowfat cooking.

You will also find a variety of practical tips, many of them as simple as draining meats after cooking. In addition, there are suggestions for new ways to make old favorites, such as a reduced-fat pie crust.

Pictured here from USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials* are Fish Scandia, Corn and Green Bean Casserole, and a variety of desserts. Beef Stir-Fry is shown on page 158. For more information on the tool kit, see Appendix 3.





Showcase What You Are Serving

■ **Make sure the foods you are serving look good from start to finish.**

You may have heard someone say about a meal: "The food may *taste* good, but it sure doesn't *look* good." Let's face it — we all eat with our eyes as well as our palates. Keep this in mind as you plan menus. Put together complimentary foods, pleasing color combinations, and a variety of shapes, tastes, and textures.

Also give thought to what your customers will see as they move through the serving line. For example, group menu choices so students can make decisions easily. Use neatly printed signs that are simple to read and understand. Make sure students don't have to wait to pick up several items grouped at one spot. In addition:

- **Display foods neatly and in a manner that showcases their colors, textures, and shapes.** For example, garnish steamtable pans to increase eye-appeal. Put food neatly onto plates or trays.
- **Use pans that fit properly into steamtable wells.** Make sure they are not too big, and not too small.
- **Use pans and utensils that look good on the serving line.** Make sure they are clean and free of unappetizing baked-on foods.
- **Use crushed ice to keep cold foods cold.** It looks nice, too!



The rest of this chapter gives you how-to ideas you can use to cook for quality and good health! Here's a quick guide:

How to Protect the Nutrients in Food

What Causes Nutrient Loss And What Can You Do About It? ..... page 159
When Working With Grains ..... page 160
When Cooking Fruits and Vegetables ..... page 161

How to Trim the Fat

A Closer Look at Fat and Cholesterol ..... page 162
Smart Choices for Lowfat Cooking ..... page 164
Tips for Lowfat Baking ..... page 166
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How to Lower Salt and Sodium

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How to Protect the Nutrients in Food

WHAT CAUSES NUTRIENT LOSS AND WHAT CAN YOU DO ABOUT IT?

Water-soluble vitamins such as vitamin C and the B vitamins are easily destroyed by excess water, air, heat, and light. They are also affected by the pH balance of the cooking liquid. Fat-soluble vitamins A, D, E, and K are more stable. No matter how careful you are, food preparation of any kind destroys some nutrients. Excessive losses, however, can be reduced through proper preparation techniques.

To avoid losing nutrients, be careful with...

... **Water.** Soaking food in water dissolves water-soluble vitamins and minerals. Avoid it except when absolutely necessary. If foods, such as vegetables, must be soaked or remain in water during cooking, use as small amount of water as possible and use the leftover cooking liquid in soup or in another product.

... **Heat.** Heating food causes nutrient loss, especially vitamin C. For example, the vitamin C content of canned peas will differ significantly from that of cooked frozen peas. Frozen peas are higher in vitamin C because heat from the canning process has already destroyed some of the vitamin C in canned peas.

... **Light.** Milk is an excellent source of riboflavin; but if it is allowed to stand open or is exposed to light, considerable destruction of riboflavin can occur. A light-obstructing container, such as a cardboard carton, can help prevent this. If you are using another type of container, be sure to store it away from light.

... **pH Balance.** Baking soda should not be added to green vegetables to retain color during cooking. It makes the cooking water alkaline, destroying thiamin and vitamin C.

... **Air.** Vitamins A, C, E, K, and the B vitamins — thiamin, pyridoxine, biotin, and folate (also called folic acid) — are destroyed by exposure to air. To reduce nutrient loss:

1) Cut and cook vegetables in pieces that are as large as possible.
2) Store foods with proper covers.
3) Cook vegetables as soon after cutting as possible.
4) Cook vegetables until "just tender."
5) Prepare food as close to serving time as possible.

How to Protect the Nutrients in Food

WHEN WORKING WITH GRAINS

Health experts encourage Americans to choose grains and breads as a major component of a nutritious diet. This is why grains and breads form the base of the USDA Food Guide Pyramid. To provide maximum benefit, they must be prepared correctly. Some tips:

To retain the nutrients in grains, be careful with...

... **Washing and rinsing.** Never wash rice before cooking. Rice is enriched by spraying with vitamins and minerals. As a result, when you wash rice, the enrichment goes right down the drain. Rinsing cooked grains and pastas also causes considerable loss of nutrients and is not recommended.

... **Toasting.** Browning uncooked rice before adding water can destroy a lot of the thiamin content.

To make your meals more nutritious...

... **Substitute whole-wheat flour for part of the white flour in recipes.** When introducing whole grains, try starting with 10 percent whole-grain flour or grains and gradually increase the amount over time.

Using part all-purpose flour and part whole-wheat flour is more acceptable in some products than 100-percent whole wheat, although this does not apply to all products. For example, some food service operations have found that children liked a pizza crust made with 1/3 whole-wheat flour and 2/3 white flour, but not a 100-percent whole-wheat crust.

... **Make oat flour by grinding oatmeal in a blender or vertical cutter mixer.** You can use oat flour with other flours for breading, baking, and thickening sauces.

How to Protect the Nutrients in Food

WHEN COOKING FRUITS AND VEGETABLES

Advances in food technology make it possible to obtain fruits and vegetables in many forms. You can get them fresh, frozen, or canned; whole or pre-cut; bulk or pre-portioned. In any form, fruits and vegetables need to be handled and stored correctly to retain nutrients and ensure food safety.

You might be surprised to learn that value-added produce (fresh cut ready-to-use fruits and vegetables) can be a vehicle for food-borne illness if improperly stored or handled. To help you evaluate a supplier of value-added produce, see Appendix 10 for tips on sanitation, temperature, and dating.

For best results when cooking fruits and vegetables...

- **When cooking vegetables, prepare small amounts.** Avoid long exposure to heat. Fresh or frozen vegetables can be cooked by several different methods. You can steam, bake, or saute them. Regardless of the cooking method you choose, it's better to prepare small amounts than to cook single large batches. Nutritive value is lost and quality is lowered with long exposure to heat.

- **To retain nutrients and bright colors, cook "just until tender."** A good way to cook vegetables is using a convection steamer.

- **Use carefully timed "batch cooking" to avoid having vegetables held too long on the serving line.** A good rule of thumb: The quantity you cook should not exceed the amount you can serve in 15 minutes. This applies to both vegetables served alone and to vegetables used in recipes such as beef or chicken stir-fry.

How to Trim the Fat

A CLOSER LOOK AT FAT AND CHOLESTEROL

Medical experts agree that eating too much fat, especially saturated fat and cholesterol, can take its toll on our health. While it's true that we need some cholesterol, the human body can make its own supply. Having a large amount of saturated fat and cholesterol in our diet is linked to increased blood cholesterol levels and a greater risk of heart disease.

As you work to reduce fat in school meals, your first strategy should be to decrease the total amount of fat you use. But keep in mind, reducing saturated fat is also your goal.

To reduce fat, especially saturated fat...

- **Be aware of the fat and cholesterol content of foods.**

  Meat, poultry, fish, milk, cheese, egg yolk, and organ meats are all major sources of cholesterol. Serving less fat from these sources can help lower blood cholesterol as well as reduce total fat and saturated fat intake.

  For sure, we *don't* want to stop serving these foods — they contain valuable nutrients. But we can make changes in the *way* we prepare and serve them.

  For example, we can use leaner cuts of meat; trim fat and skin from chicken; offer lowfat or fat-free milk; and modify recipes in a variety of ways. You will find suggestions like these in Chapter 4 as well as this chapter.

  In addition, in response to a growing interest in leaner diets, lower fat versions of many foods are now available. As you plan your menus, take advantage of opportunities to reduce fat. After all, it's just as easy to make or purchase pizza with lowfat cheese, and it will help you meet nutrition goals for fat!

- **Be aware of differences in cooking oils. Instead of using a saturated fat — such as butter, solid or "stick" margarine, palm oil, palm kernel oil, or coconut oil — it's better to choose an unsaturated fat, like olive or safflower oil, when possible.**

  Saturated fats are usually solid at room temperature and are generally of animal origin. However, three vegetable oils — palm, palm kernel, and coconut — also contain a lot of saturated fat.

  Unsaturated fats are usually liquid oils at room temperature and are of vegetable origin. Some are what is called "mono-unsaturated" — olive, peanut, and canola oils are examples. Others are "polyunsaturated" — safflower, sunflower, soybean, cottonseed, and corn oils are examples.

- **Check food labels and ingredient lists for overall fat and saturated fat. Choose products that are lower in fat and include less saturated fat.**

  You will want to know what type of fat a product contains. Watch out for ingredients that tell you a product may be high in saturated fat — for example, check for coconut oil, palm oil, cream, cocoa butter, beef fat, poultry fat, lard, or butter.

  Better choices for reducing saturated fat would be products that include unsaturated oils: safflower, corn, soybean, cottonseed, sesame, canola, and olive.

- **Think about reducing fat at every step!**



Using leaner cuts of meat (such as the 95% fat-free turkey ham from USDA pictured at right) is a good way to reduce fat. See pages 164 to 175 for more suggestions.



How to Trim the Fat

Smart Choices for LOWFAT Cooking

There are lots of ways to be creative when you're cutting back on fat. You've probably already discovered many! Add these ideas to your list if they are not already on it.

- When adding fats to recipes, select unsaturated fats such as liquid oils or soft margarine.
- Make marinades without oil.
- Cook rice, grains, and beans in defatted broth and add herbs, garlic, or onions for more taste.
- Make a lowfat "cream" topping using cottage cheese, yogurt, lemon juice, and fat-free milk. (See recipe next page.)
- Make a "tomato-cream" sauce with lowfat milk or fat-free evaporated milk flavored with a few tablespoons of tomato sauce. (See recipe next page).
- When possible, skin chicken before cooking.
- Drain all meats after cooking.
- De-fat whenever possible. If your school has the ability to quickly chill and reheat foods in a safe manner, allow time to let your stews, soups, and braised dishes cool so that the fats will rise to the top, congeal, and be easy to spoon off.

Lowfat "Cream" Topping

Lowfat Version A	Lowfat Version B	Lowfat Version C
Stir until blended:	*Blend well:*	*Stir until blended:*
1 cup lowfat cottage cheese	1 cup plain lowfat yogurt	1 cup lowfat cottage cheese
1 Tbsp. fat-free milk	1 Tbsp. lowfat mayonnaise	1 cup nonfat plain yogurt
2 Tbsp. lemon juice		

Lowfat "Tomato-Cream" Sauce

Mix together:

1 cup lowfat milk or fat-free evaporated milk

1 Tbsp. cornstarch

3 to 4 Tbsp. tomato sauce

An excellent source of lowfat recipes and ideas is USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials.* See Appendix 3 for more information.

How to Trim the Fat

Tips for LOWFAT Baking



Did you know...

... you can generally cut the fat in your recipes by 1/4 to 1/3 *without* losing the great taste in baked items?

... that chilled, undiluted evaporated fat-free milk can be a great substitute for cream?

... that some yeast breads such as French bread and English muffins can be made successfully without fat?

You may also be interested to find out that...

... decreasing the fat too much in *rolled* cookies can make a dough that is difficult to roll out. Switching to *soft drop* cookies allows you to cut fat with better results.

... you can use fruit purees, such as prune puree or applesauce, in place of up to half the fat in some baked goods.

For best results in reducing total fat and/or saturated fat...

Replace butter and lard with soft margarine or vegetable oil.

Use a non-stick cooking spray on baking pans.

Check ingredient labels and recipes for high-fat foods. When possible, choose similar products without high-fat ingredients.

Just how little fat can you use and still have great taste?

The examples on the next page will give you a clue.

Simple substitutions can make a big difference.

For example, using lowfat yogurt instead of sour cream reduces the amount of fat by 18 grams per 1/2 cup. See below for this and other examples.

How Little Fat Can You Use... And Still Have Great Taste?

For these baked items:	*Minimum fat needed is:*
Muffins, Biscuits, Quick Breads	2 Tbsp. per 1 cup flour
Cakes, Soft Drop Cookies	2 Tbsp. per 1 cup flour
Pie Crust	4 Tbsp. per 1 cup flour



Substitutions Can Make A Big Difference

When you replace this...	With this...	You will lower fat grams by:	You will lower calories by:
Whole milk	Fat-free milk	8	64 per cup
Whole egg, 1	Egg whites, 2	6	47
Cream cheese	Fat-free cream	10	90 per 2 Tbsp.
Ricotta cheese	1% cottage cheese	14	52 per 1/2 cup
Cheddar cheese	Mozzarella, skim	4	42 per oz.
Heavy cream	Half and half	32	15 per Tbsp.
Sour cream	Lowfat yogurt	18	172 per 1/2 cup
Mayonnaise	Reduced-fat mayonnaise	6	60 per Tbsp.
Baking chocolate (1 oz.)	Cocoa (3 Tbsp.)	7	63 per Tbsp.
Evaporated milk	Evaporated fat-free milk	2.5	40 per 2 Tbsp.

How to Trim the Fat

HOW TO USE LESS FAT WHEN SAUTEING AND STIR-FRYING

Brush the pan with oil just to coat it or use a nonstick spray made from vegetable oil. Typically, using a vegetable oil spray will add less than 10 fat calories to a pan of sauteed vegetables. In contrast, 2 tablespoons of oil add an extra 240 fat calories.

When stir-frying, keep the oil in your kettle very hot. Vegetables soak up cold oil more quickly than hot oil.

Cut back on buttering vegetables by using one part margarine and one part lemon juice.

Experiment with ways to add flavor and moisture without adding fat. Marinades are a good way to do this. Also try using chicken or meat broth, concentrated fruit juice, or perhaps fresh fruit or vegetable juice.

★ ★

CUT BACK ON DEEP-FAT COOKING ...AND USE LESS FAT

Use deep-fat frying infrequently since it increases the fat content of food. But when you do deep fry, it's best to use unsaturated vegetable fat. Because this type of fat has a higher smoke point, it can be used at a higher temperature, resulting in less fat absorption. Canola oil, for example, works well for deep-fat cooking.

Here are some additional tips to reduce fat absorption:

1. **Use a deep pot or fryer and make sure it is only half full of oil.** Fat expands when heated and frequently boils up or foams when foods are added.

2. **Heat the oil to the highest recommended temperature for the food being fried.** This is important because when food is added, it cools down the oil, and more fat is absorbed. See page 170 for recommended temperatures for some common foods.

3. **Do not overload.** Overloading a fryer may also drop the temperature and result in excessive grease absorption. Follow product directions for the quantity to fry in a batch.

4. **Allow the oil to reheat between batches.** In addition, be sure your automatic thermostats are working correctly.

5. **Add dry foods to the fryer.** This will help prevent spatter and foam.

6. **Gently shake the basket before taking it out of the fryer.** This will help remove excess fat.

7. **Drain food on absorbent paper over racks.** Change the paper frequently because fat-soaked paper will not continue to absorb excess fat.

8. **Strain the fat to remove foreign materials.** Foreign materials can lower its smoke point.

To Minimize Fat Absorption When Deep-Fat Frying, Make Sure the Temperature is High Enough

FOR EXAMPLE:

For these foods...	*The recommended temperature range (F) is:*
Uncooked chicken, fish, pre-cooked breaded chicken	350° to 360°
Precooked shrimp, croquettes, tempura, fritters	375° to 385°
French-fried potatoes, onion rings	385° to 395°
Potato and tortilla chips	395° to 400°

How to Trim the Fat

Some Helpful EXAMPLES

It's smart to cut back on fat. But exactly how can you do this? The examples below illustrate some successful ways. On the left you will find the name of a common food. Thirteen are listed alphabetically, from buttered bread to sour cream. On the right are smart choices you might make when preparing or serving that particular food.

WHAT TO DO WITH THIS FOOD?	SOME SMART CHOICES FOR REDUCING FAT INCLUDE...
Buttered Bread	■ Butter bread lightly with *whipped* butter. (If you are using USDA commodity butter, allow the butter to soften at room temperature. Use a wire whip or paddle on mixer to whip until about double in size.) ■ Replace butter with jam or jelly.
Buttered Vegetables	■ Steam vegetables using no butter. ■ Use half the amount of butter. ■ Use crumb or herb topping (start by combining 2 tablespoons chopped parsley, 4 teaspoons finely grated lemon rind, and 1 clove of peeled, minced garlic).
Cake Mixes	■ Substitute lowfat yogurt, applesauce, or prune/plum puree for some of the oil. ■ Use two egg whites in place of each whole egg.
Cheese	■ Purchase lower fat brand. ■ Serve cheese less often. ■ Mix part-skim mozzarella with regular cheese.

EXAMPLES *continued*

WHAT TO DO WITH THIS FOOD?	SOME SMART CHOICES FOR REDUCING FAT INCLUDE...
Chicken Nuggets	■ Purchase lower fat brand. ■ Bake instead of fry, or drain after frying and pat with paper towels. ■ Serve less often.
Chicken Patties	■ Purchase lower fat brand. ■ Purchase non-breaded chicken cutlets. ■ Bake instead of fry, or drain after frying and pat with paper towels.
Fish	■ Bake instead of fry. ■ Offer catsup or salsa as a condiment in place of tartar sauce. ■ Mix tartar sauce with plain lowfat yogurt. ■ Use individual condiments in a small quantity as an optional item.
French Fries	■ Bake instead of fry. ■ Select brands prepared in vegetable shortening or oil. ■ Make your own cut-up potatoes and bake with little or no oil. Season with garlic powder, onion powder, and a small amount of salt and pepper. ■ Look for opportunities to offer lower fat alternatives, such as baked potatoes.
Hot Dog	■ Consider a chicken or turkey hot dog. ■ Check the fat grams on the label. ■ Consider a part-soy product. ■ Serve less often.

EXAMPLES *continued*

WHAT TO DO WITH THIS FOOD?	SOME SMART CHOICES FOR REDUCING FAT INCLUDE...
Milk	■ Replace whole milk or reduced-fat (2%) milk in puddings, soups, and baked products with fat-free milk, lowfat (1%) milk, or reconstituted fat-free dry milk.
Pizza	■ Select pizza made with part-skim mozzarella cheese. ■ Select pizza made with reduced-fat cheddar cheese or with a blend of reduced-fat cheddar cheese mixed with part-skim mozzarella. ■ Select vegetable-topped pizza. ■ Select turkey-topped pizza.
Salad Dressing	Keep in mind that most ladles on salad bars hold at least 2 tablespoons of dressing. One tablespoon of regular salad dressing typically contains 5 to 11 grams of fat or 45 to 99 calories. Since you can't control the amount of dressing a student puts on a salad, it is important to offer a reduced-fat salad dressing. To do this you might... ■ Use less oil than recipe suggests. ■ Use ranch-style dressing with lowfat yogurt substituted for half the mayonnaise. ■ Use reduced-calorie (light) mayonnaise-type dressing. ■ Purchase acceptable-tasting nonfat dressings. ■ Substitute plain lowfat yogurt for part or all of the mayonnaise in creamy salad dressings.
Sour Cream	■ Replace with lowfat or fat-free sour cream, plain lowfat or nonfat yogurt, blender-whipped lowfat or fat-free cottage cheese, or 1% buttermilk.

How to Trim the Fat

Meeting the FAT Challenge

You are reading through a new recipe and you come upon an ingredient that might contribute more fat calories than you want. Your challenge is to use that ingredient in a different way, make adjustments, or perhaps find a substitute.

YOUR CHALLENGE IS...	SOME POSSIBLE SOLUTIONS ARE...
Ground beef or pork is in the recipe.	■ Drain meat well after browning. ■ Replace half of the meat with lean ground turkey, drained after browning. ■ Replace 1/4 of the meat with mashed beans. For example, canned USDA great northern, pinto, or red beans are great in tacos. Use 1/4 cup of beans as equivalent to 1 ounce of meat if using Traditional or Enhanced Food-Based Menu Planning. (The 1-ounce equivalent does not apply to NSMP and Assisted NSMP.) ■ If possible, buy leaner ground meat. ■ If using Traditional or Enhanced Food-Based Menu Planning, use only as much Meat/Meat Alternate as needed to meet the meal pattern requirement. (This requirement does not apply to NSMP and Assisted NSMP.)
Fat is in the recipe.	■ Reduce the amount of oil, butter, or shortening used. ■ Eliminate butter, oil, or shortening completely when possible. Replace with fruit purees, when appropriate. ■ For overall health, be sure the type of oil used is unsaturated.

YOUR CHALLENGE IS...	SOME POSSIBLE SOLUTIONS ARE...
Mayonnaise is in the recipe.	■ Use 1/2 to 2/3 of the amount of mayonnaise specified. ■ Replace 1/2 of the mayonnaise with plain lowfat or nonfat yogurt. ■ Use reduced-fat mayonnaise.
Cheddar cheese is in the recipe.	■ Use only as much cheese as needed to meet the Meat/Meat Alternate requirement for Traditional or Enhanced Food-Based Menu Planning. (This requirement does not apply to NSMP and Assisted NSMP.) ■ Instead of all cheddar, use 1/2 or less cheddar and more part-skim mozzarella.
American cheese is in the recipe.	■ Use only as much cheese as needed to meet the Meat/Meat Alternate requirement. (This requirement applies only to Food-Based Menu Planning, not to NSMP and Assisted NSMP.)
Recipe calls for roux (flour and fat thickener).	■ Replace part or all of the roux with cornstarch slurry (cornstarch and water) or flour and water, using an amount of cornstarch equal to 1/2 of flour called for, and enough cold water to dissolve cornstarch.
Recipe calls for frying food.	■ Bake food.

How to Lower Salt and Sodium

TIPS FOR USING MODERATE AMOUNTS OF SALT AND SODIUM

1. **Select foods and recipes carefully.** Identify and choose low-sodium foods, especially when purchasing processed products. Look for recipes that contain only a small amount of high-sodium ingredients.

2. **Add salt only if necessary.** If some of the ingredients in a recipe already contain salt — canned soup, canned vegetables, or cheese, for example — you may not need to add salt at all.

3. **Gradually reduce the amount of salt in recipes.** For example, instead of eliminating salt completely, try decreasing it by 1/4 at first, then gradually by 1/2. This will probably be more satisfactory to customers.

4. **Add less salt to water when cooking pasta, rice, and hot cereal.** Use 1 tablespoon salt per gallon of water. This provides flavor but is still low in sodium.

5. **Try using salt-free or lower salt seasoning mixes.** You can make these yourself or purchase them. Put the mix in marked shakers and use on the serving line for self-serve.

6. **Use fresh or fresh-frozen meats in recipes instead of canned meats whenever possible.**

7. **Enhance flavor with spices and herbs.** When you are reducing fat or salt, you may need to adjust other seasonings. See pages 177 and 178 for some spice blend recipes and other suggestions.

How to Lower Salt and Sodium



TIPS FOR SEASONING VEGETABLES

Seasoning vegetables with herbs and spices reduces the need for added salt. Try the suggestions below to enhance the natural flavors of vegetables.

USE....	TO SEASON....
Allspice	Winter squash, sweet potatoes
Basil	Cabbage, carrots, green peas, spinach, tomatoes
Caraway	Beets, cabbage, cauliflower, green beans, wax beans, zucchini
Cardamom	Winter squash, sweet potatoes
Celery seed	Cabbage, carrots, cauliflower, celery, sauerkraut, tomatoes
Chili powder	Corn, tomatoes
Cinnamon	Beets, carrots, sweet potatoes, onions, tomatoes
Curry	Cabbage, celery, lima beans
Dill seed	Beets, cabbage, carrots, cauliflower, celery, green beans, green peas, wax beans
Garlic powder	Green leafy vegetables, broccoli, cauliflower
Lemon juice	Green leafy vegetables, broccoli, cauliflower
Mace	Cauliflower
Marjoram	Broccoli, carrots, cauliflower, green peas, spinach, zucchini
Mint	Carrots, green peas, spinach
Mustard seed	Cabbage
Nutmeg	Celery, spinach, winter squash

USE....	TO SEASON....
Onion powder	Cabbage, green beans
Oregano	Green peas, tomatoes, zucchini
Parsley	Tomatoes, corn
Rosemary	Cauliflower, spinach, turnips
Sage	Green beans, onions, tomatoes, wax beans
Tarragon	Cauliflower
Thyme	Carrots, celery

★ ★

How to Lower Salt and Sodium

TRY THESE SPICY BLENDS!

Instead of offering salt on your cafeteria tables, try different spice blends. You can put them in shakers, just as you would salt. Many salt-free seasonings are available commercially, but you can also make your own. A few spice blend combinations are listed below.

The directions are the same for each: Combine all ingredients in amounts listed and blend thoroughly. If the ingredients stick together when you put the blend in salt shakers, add a few grains of uncooked rice.

Spicy Flavor Blend
2 Tbsp. savory, crushed
1 Tbsp. powdered mustard
2-1/2 tsp. onion powder
1-1/2 tsp. curry powder
1-1/4 tsp. ground cumin
1/2 tsp. garlic powder

Herbed Seasoning Blend
2 Tbsp. dillweed or basil leaves, crushed
2 Tbsp. onion powder
1 tsp. oregano leaves, crushed
1 tsp. celery seed
1/4 tsp. grated lemon peel (dried)
Dash black pepper

All-Purpose Spice Blend
5 tsp. onion powder
2-1/2 tsp. garlic powder
2-1/2 tsp. paprika
2-1/2 tsp. powdered mustard
1-1/4 tsp. thyme leaves, crushed
1/2 tsp. white pepper
1/4 tsp. celery seed

All Seasons Seasoning Blend
1 tsp. basil
1 tsp. marjoram
1 tsp. thyme leaves, crushed
1 tsp. oregano leaves, crushed

How to Equip Your Kitchen

TIPS ON CHOOSING AND USING EQUIPMENT FOR HEALTHY SCHOOL MEALS

As you work to plan and prepare healthy meals, you will want to select equipment carefully. For example, instead of using a deep-fat fryer to make French fries, use the oven. Oven-baked French fries are much lower in fat.

Your current equipment is probably versatile enough to support the kinds of changes you will be making as you modify recipes to meet the nutrition goals. Especially helpful will be equipment, like steamers, that allow you to cook foods with little or no fat.

Here's a list of some of the equipment that can help you prepare healthy meals. You may have found other equipment to be helpful as well.

- **Tilting skillets:** These are convenient and fast for braising, pan-frying, sauteing, steaming, boiling, and pot-roasting.
- **Steam-jacketed kettles:** Faster and simpler to control than range-top cookers, these are good for soups, stocks, sauces, stews, vegetables, and more. When steam-jacketed kettles are used properly, fewer nutrients are lost due to heat and time.
- **Pressure steamers or pressureless convection steamers:** Steamers provide the best vitamin retention because they cook more quickly. They are great for batch-cooking in high-volume school food service. Rice, pastas, and vegetables can be cooked in steamers.
- **Convection or conventional ovens:** You can use these for baking, roasting, and broiling, all of which are lowfat cooking techniques. When fats in meat are heated at high temperatures, this changes the physical properties of fat from a solid to a liquid, so the fat drains away.
- **Combi ovens:** These will reheat prepared food without drying it out. They will also roast meats with little shrinkage. They can heat by steam, dry heat, or steam/dry heat.
- **Microwave ovens:** When foods are prepared in a microwave oven, they retain more nutrients than foods that are boiled, baked, or even steamed. This is especially helpful in batch-cooking vegetables. (Microwave ovens are becoming more popular and affordable in school food service.)
- **Cook/holding cabinet:** No food should be held in a warming unit longer than 30 minutes if you want to serve a quality product and retain nutrients. You will have two problems — unhappy customers and fewer nutrients!

CHAPTER 7

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

Menu Planning Records



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Menu Planning Records



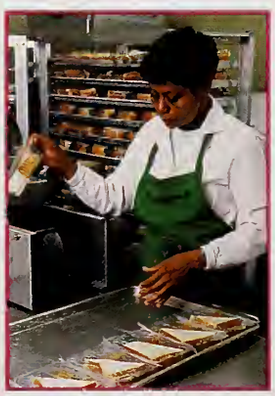
Good recordkeeping is part of any successful food service operation. A tool like the production record helps you plan from day to day as well as communicate your plans to your staff. How much food needs to be prepared for a particular day's lunch or breakfast? The production record tells you at a glance.

Good records also provide a valuable written history for future reference. They help you spot trends, evaluate what works best with your customers, and decide what changes need to be made. In addition, during state reviews your records demonstrate that your meals comply with program requirements.

In this chapter, we'll focus primarily on production records, which, as you know, keep track of a lot more than food quantities.

We'll also look at standardized recipes — why it makes sense to use them, how they help ensure quality, and what they contribute to good planning and recordkeeping. Finally, we'll look at what kind of records you will need for processed foods. We'll see what kind of information you will want to have on hand and how you might go about requesting nutrient data from food manufacturers if you don't already have it.

On page 201, you will find a standardized form developed by USDA to help school districts obtain nutrition information from manufacturers. You may want to copy and use this when you need information from a manufacturer or vendor. In addition, you might want to attach it to the bid package you send out when purchasing food.







Production Records

Production records vary in format, but any successful record accomplishes two things. First, *it gives the staff information* — what foods and recipes to use, for example, and what portion sizes to serve. Second, *it enables staff to record information*, such as actual quantities prepared and numbers served.

Starting on page 191 are some *sample* production record formats. The first set is for Food-Based Menu Planning systems. The second set is for Nutrient-Based systems. In each set, you will find:

- *Blank forms showing suggested formats*. You may want to select one of these to copy and use in your own operation. Or, you might get ideas for designing your own form.
- *Completed sample forms*. These illustrate how a form might look when completed for a typical meal.

As you look over the samples for Food-Based and Nutrient-Based planning systems, you will see they provide much of the same information. The variations in format and wording reflect the basic differences between the two approaches. (As we've seen in Chapters 2 and 3, Food-Based systems use meal patterns and specific food components as planning tools, while Nutrient-Based systems use computerized nutrient analysis.)

Be sure to look carefully at the *heading* on each sample form.

- *For Food-Based Menu Planning*, you will find Sample Format #1 (which can be used for both Traditional and Enhanced systems) and a more specialized Sample Format #2. Note that there are *two* separate versions of the second format — Sample Format #2 is for Traditional, while #2A is for Enhanced.
- *For Nutrient-Based Menu Planning*, you will find Sample Format #3 and Sample Format #4.

You may use any form you wish as long as it includes certain key items. These items are summarized and then explained in more detail on the following pages.

What's needed on a production record for Food-Based Menu Planning?

A production record for Traditional or Enhanced Food-Based Menu Planning should indicate the site and meal date, the menu type (breakfast or lunch), and...

- Food components (Meat/Meat Alternate, etc.) and other items, including condiments.
- Recipe or food product used (note if a USDA recipe).
- Planned/projected number of portions and serving sizes for each age/grade group.
- Planned/projected number of portions and serving sizes for adults.
- Total amount of food prepared (for example, number of servings, pounds, cans).
- Actual number of reimbursable meals served (indicate this information for each age/grade group).
- Actual number of nonreimbursable meals served (such as to adults or as a la carte sales).
- Leftovers and substitutions.

What's needed on a production record for Nutrient-Based Menu Planning?

A production record for Nutrient-Based Menu Planning should indicate the site and meal date, the menu type (breakfast or lunch), and...

- Menu items used and form.
- Recipe or food product used (note if a USDA recipe).
- Planned/projected number of portions and serving sizes for each age/grade group.
- Projected number of portions and serving sizes for adults.
- Projected number of student servings.
- Projected number of total servings.
- Total amount of food prepared (for example, the number of servings, cans, etc.).
- Actual number of reimbursable meals served (indicate this information for each age/grade group).
- Actual number of nonreimbursable meals served (such as to adults or as a la carte sales).
- Substitutions or leftovers.

■ **What additional information might you include on your production record?**

You can tailor the production record to your own operation, including additional information if you wish. On some of the sample formats, for example, you will see "person responsible." Be sure to include *at least* the items listed on page 183.

■ **When is the production record completed?**

Usually, the menu planner completes the first part of the production record in advance. The staff completes the remaining sections on the day the breakfast or lunch is served.

COMPLETING A PRODUCTION RECORD

Here are more details on what is needed for production records. You will see a number of differences noted for Food-Based and Nutrient-Based planning, but in general, similar information is needed for both systems.

1 **Menu item (or food item) used and form:** Listing this information is the first step in effectively communicating the menu to the staff. Listing all food items, including condiments, is important for future monitoring by the state agency.

2 **Recipe or product:** Indicate specific recipes and food products to be used. It is critical to specify *exact* recipes and products. If the preparer or server uses a different recipe or product than indicated by the menu planner, the food provided to students may not necessarily meet the nutrient standard or meal requirements as planned.

As shown on the sample formats, you will list: (1) the recipe number if it is a USDA quantity recipe; (2) the name of the food and its form (such as shredded lettuce). For processed foods, list brand name and code number.

3 **Age or grade group(s):** Identify the age or grade group being served. If a menu serves more than one age or grade group at a site, you may use one production record to show this, but notations for each age/grade group must be clear. Adjusted portion sizes for age or grade groups specified must be shown for menu items, recipes, and products.

4 **Portion or serving size:** This information is important to ensure that the correct portion size is *served* as well as planned and prepared. Without this guide on the production sheet, the server may have no way of knowing the correct portion size.

Portion size served must be the same as planned. If portion size is adjusted for age, a separate line should be used to indicate this. (USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials* includes helpful information on the portion size for various serving utensils. See Appendix 3.)

5 **Total projected servings:** The menu planner also must forecast, or predict, the approximate number of servings needed of each menu item. Projecting the number of servings is the first step in determining how much food to order, how much time to allot for preparation, and which equipment to use.

In menus that offer several different selections or with Offer versus Serve, it will not be necessary to plan and prepare portions of each menu item for each person. Past production records, which must be kept on file, can help accurately forecast future production and menu planning figures for all menu planning options.

6 **Amount of food (or purchase units) used:** Site staff must keep records to verify that the planned menu was actually prepared and served. Staff record this information in a way that is appropriate for the food item. On the sample sheets, for example, you will see: 220 servings of Salisbury Steak, 76-1/4 pounds of chicken nuggets, and 20 pans of Cherry Cobbler.

7 **Actual servings:** At the end of service, site staff must record the number of servings of each item that were actually served to students, to adults, and as a la carte sales.

Under Nutrient-Based Menu Planning, the information on actual student servings should be available during the menu planning and adjustment process. Future menu cycles should reflect any significant differences between the projected servings and the actual servings.

Under Food-Based Menu Planning, the information retrieved from the menu production records will be required during the state review for compliance with the nutrition goals.

8 **Leftovers:** Once a meal is served, site staff record leftovers on the production record. In some schools, staff members also indicate whether leftovers are to be frozen for later use or incorporated into the menu in the next few days. Tracking the source of leftovers is important.

9 **Use of leftovers and substitutions:** For Nutrient-Based Menu Planning, menu planners record use of leftovers or substitutions.

Standardized Recipes

A standardized recipe is one that has been tried, adapted, and retried several times for use by a given food service operation and has been found to: *produce the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients*.

What are the advantages of standardized recipes?

1. *Standardized recipes help ensure product quality.*
   - They provide consistently high quality food items.
   - The same amount of product is produced each time.
   - The same portion size is provided each time.

2. *Menu planning can be more consistent because:*
   - You can accurately predict the number of portions from each recipe.
   - Predictable yield will help eliminate excessive amounts of leftovers and substitutions.

3. *Costs are easier to control.*
   - Inventory is easier because recipes specify exact amount of ingredients.
   - You can better manage purchasing and storage.

4. *When the same good results can be produced time after time:*
   - Food service workers have more confidence in what they are doing.
   - Managers can be sure the nutrient analysis of a recipe will be accurate as long as ingredients and preparation methods remain the same.
   - Students will be happier because food quality will be consistent.

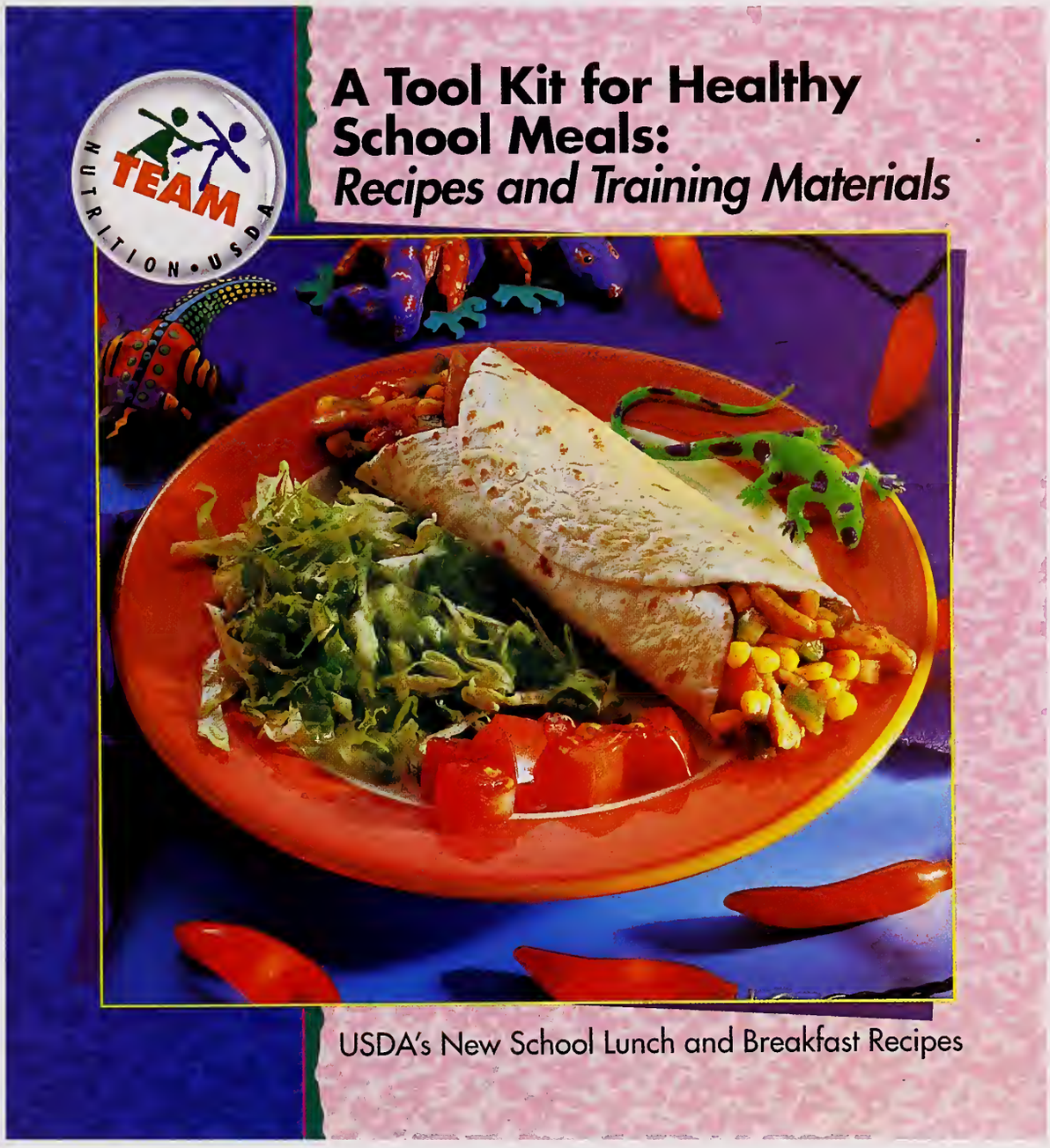
What are some good sources of standardized recipes?

The following USDA materials contain standardized recipes for school meals. You will find more information on these in Appendix 3.

— *USDA Quantity Recipes for School Meals*

— *A Tool Kit for Healthy School Meals: Recipes and Training Materials*

— *The School Lunch Challenge I, II, and III Recipes*



- **Are standardized recipes important for both Food-Based and Nutrient-Based Menu Planning systems?**

Standardized recipes are an important part of any well-managed food service operation. For Food-Based Menu Planning, standardized recipes are essential to ensure that food is of top quality and that the planned food serving sizes are provided to students. In addition, as we saw in Chapter 2, when state agency representatives analyze menus to check for compliance with nutrition goals, they will need to know which recipes were used and have copies of those recipes supplied to them.

For Nutrient-Based Menu Planning, standardized recipes are *required* to achieve food quality and an accurate and valid nutrient analysis.

What kind of information should be included on a standardized recipe form?

If you are standardizing your own recipe, or modifying an already standardized recipe such as from USDA, you will want to keep careful records. The sample form on page 200 may be helpful; however, you may use any form you wish. The following information should be completed on the form:

1) *Yield*: Include serving size and number of servings.

2) *All ingredients*: Include form (such as fresh, frozen, or canned); packing medium (such as canned in juice or light syrup, frozen with added sugar or plain), and fat content (such as "20% fat ground beef" or "ground pork, no more than 30% fat).

3) *Correct measures, weights, and/or pack size*.

4) *Preparation procedures*.

Foods of minimal nutritional value that are part of a menu item (meaning they are ingredients used in preparing this item) must be included in the nutrient analysis. Therefore, they should be included on the standardized recipe form. (If foods of minimal nutritional value are served alone, they should not be included in the nutrient analysis.)

For which menu items will you need to keep recipes?

Recipes will be needed for any menu item indicated on production records that contains more than one ingredient, such as Beef Stir-Fry, seasoned vegetables, and sandwiches.

Processed Foods

No matter which menu planning system you choose, you must keep records of processed foods used in meals. How will you get the information you need?

If you are using Nutrient-Based Menu Planning...

First check the Child Nutrition Database to see if the item is included there. If it is not, you will need to request nutrient data from a source such as the food manufacturer or food distributor or broker. On page 201, you will find a standardized form you may want to use for this purpose.

If you are using Traditional or Enhanced Food-Based Planning...

You will need either: (1) a Child Nutrition Label; or (2) a letter from the manufacturer which states the product and the food components to be credited to that product. (For more information on Child Nutrition Labels, see Appendix 6.)

If you wish to obtain the nutrient data of products for your own planning purposes or for the state nutrition review, you can request this information from a source such as the food manufacturer or distributor or broker. See page 201 for a standardized form you may want to use for this purpose.

Here's a quick guide to the rest of this chapter:

1. Production Records for Food-Based Menu Planning

Sample Format #1: Traditional or Enhanced ..... Page 191

Sample Format #2: Traditional only ..... Page 192

Sample Format #2A: Enhanced only ..... Page 193

EXAMPLE: Traditional or Enhanced Food-Based Menu Planning
(Completed Sample Format #1) ..... Page 194

EXAMPLE: Enhanced Food-Based Menu Planning
(Completed Sample Format #2A) ..... Page 195

2. Production Records for Nutrient-Based Menu Planning

Sample Format #3: Nutrient-Based (Regular or Assisted) ..... Page 196

Sample Format #4: Nutrient-Based (Regular or Assisted) ..... Page 197

EXAMPLE: Completed Sample Format #3: ..... Page 198

EXAMPLE: Completed Sample Format #4: ..... Page 199

3. Standardized Recipe Form

Recipe Name: _____ ..... Page 200

4. Form for Requesting Nutrient Data from Manufacturers

Manufacturers' Data Submission Form ..... Page 201
Side 1: To be completed by manufacturer
Side 2: Instructions (for manufacturer) on filling out this form

Sample Format #1

Food-Based Production Record

(Traditional or Enhanced)

Site _____ **Meal Date** _____

* **Portion size:** Must be same as planned. Use separate line if adjusted for age.
** **Amount of food used:** Based on USDA Food Buying Guide or USDA recipe.

Menu

Food Item Used and Form	Recipe or Product (name or #)	Person Responsible	Grade Group	Portion Size* (#/wt./qty.)	Student Projected Servings	Total Projected Servings	Amount of Food Used** (lb. or qty.)	Student Servings	A la carte Servings	Adult Servings	Leftovers
								Actual			

Sample Format #2

Food-Based Production Record

(Traditional Food-Based Menu Planning)

Site _____

Meal Date _____

Planned Number to be Served:
- Students (K-3) _____
- Students (4-12) _____
- Students (7-12 opt.) _____
- Adults/A la carte _____

Actual Number Served:
- Students (K-3) _____
- Students (4-12) _____
- Students (7-12 opt.) _____
- Adults/A la carte _____

MENU

Food Items Served	Purchase Units Used	Serving Sizes	How Many Servings?	Leftovers/ Substitutions
Meat/Meat Alternate:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Vegetable/Fruit:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Vegetable/Fruit:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Vegetable/Fruit:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Grains/Breads:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Grains/Breads:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Condiments/Dressing:		K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt:	
Milk: Whole 2% 1% Nonfat (Skim) Chocolate _____%		K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt:	K-3: 4-12: 7-12 opt K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt: K-3: 4-12: 7-12 opt:	

Sample Format #2A

Food-Based Production Record

(Enhanced Food-Based Menu Planning)

Site _____

Meal Date _____

Planned Number to be Served:
- Students (K-6) _____
- Students (7-12) _____
- Students (K-3 opt.) _____
- Adults/A la carte _____

Actual Number Served:
- Students (K-6) _____
- Students (7-12) _____
- Students (K-3 opt.) _____
- Adults/A la carte _____

Menu

Food Items Served	Purchase Units Used	Serving Sizes	How Many Servings?	Leftovers/ Substitutions
Meat/Meat Alternate:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Vegetable/Fruit:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Vegetable/Fruit:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Vegetable/Fruit:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Grains/Breads:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Grains/Breads:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Condiments/Dressing:		K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt:	
Milk: Whole 2% 1% Nonfat (Skim) Chocolate ____%		K-6: 7-12: K-3 opt: K-6: 7-12: K-3 opt: K-6: 7-12: K-3 opt: K-6: 7-12: K-3 opt: K-6: 7-12: K-3 opt:	K-6: 7-12: K-3 opt: K-6: 7-12: K-3 opt: K-6: 4-12: K-3 opt: K-6: 4-12: K-3 opt: K-6: 7-12: K-3 opt:	

Completed Sample Format #1

Food-Based Production Record

(Traditional or Enhanced)

Site Summitville Elementary **Meal Date** May 14, 1998

* **Portion size:** Must be same as planned.Use separate line if adjusted for age.
** **Amount of food used:** Based on USDA Food Buying Guide or USDA recipe.

Menu

Salisbury Steak & WW Roll -or- Chicken Nuggets, BBQ Sauce	2 oz M/MA 1 serv G/B
Baked Potato -or- Fresh Veggies Lowfat Ranch Dressing	3/8 c VEG
Cherry Cobbler	1/2 c FRUIT 1/2 serv G/B
Milk, Variety	8 oz FL MK

Food Item Used and Form	Recipe or Product (name or #)	Person Responsible	Grade Group	Portion Size* (#/wt./qty.)	Student Projected Servings	Total Projected Servings	Amount of Food Used** (lb. or qty.)	Student Servings	A la carte Servings	Adult Servings	Leftovers
								Actual			
Meat/Meat Alternate			K-6								
Salisbury Steak	D-23	Sue		1 each	200	220	220 serv	195		10	15 serv
Chicken Nuggets	Brand X	Yolanda		5 ea/4 oz	300	305	76-1/4 lb	290		5	2.5 lb
Vegetable/Fruit											
Baked potato, 5 oz, 1/25		Akiko	K-6	1 each	300	300	300 each	250		10	40 each
Carrot sticks, pre-cut		Akiko		1/8 c	250	250	12.5 lb	235		5	1/2 lb
Broccoli flowers, pre-cut		Akiko		1/8 c	250	250	13 lb	235		5	1/2 lb
Tomatoes, cherry, fresh		Akiko		1/8 c	250	250	11 lb	235		5	1 lb
Cherry Cobbler	C-6	Akiko		25 serv/pan 1 square	500	500	20 pans	485		15	—
Grains/Breads											
Whole-Wheat Roll	Brand X	Yolanda	K-6	1 each	200	220	12 lb 6 oz	195		10	15 each
Other: BBQ Sauce	Brand Z	Akiko	K-6	portion pack/1ea	300	305	305 each	290		5	10 each
Lowfat Ranch Dressing	Brand Q	Akiko		portion pack/1ea	350	350	350 each	300		10	40 each
Milk: Variety		Sue	K-6	1/2 pint	500	500	500 (1/2 pts)	485		5	10 (1/2 pt)

Completed Sample Format #2A

Food-Based Production Record

(Enhanced Food-Based Menu Planning)

Site Summitville Elementary

Meal Date May 14, 1998

Planned Number to be Served:
- Students (K-6) 500
- Students (7-12) _____
- Students (K-3 opt.) _____
- Adults/A la carte 25

Actual Number Served:
- Students (K-6) 485
- Students (7-12) _____
- Students (K-3 opt.) _____
- Adults/A la carte 15

Menu

Salisbury Steak & WW Roll -or- Chicken Nuggets, BBQ Sauce	2 oz M/MA 1 serv G/B
Baked Potato -or- Fresh Veggies Lowfat Ranch Dressing	3/8 c VEG
Cherry Cobbler	1/2 c FRUIT 1/2 serv G/B
Milk, Variety	8 oz FL MK

Food Items Served	Purchase Units Used	Serving Sizes	How Many Servings?	Leftovers/ Substitutions
Meat/Meat Alternate:		**K-6:**	**K-6: Adult:**	
Salisbury Steak, D-23	220 each	each	195 10	15 serv
Chicken Nuggets, Brand X	76-1/4 lb	5 nuggets	305 5	2.5 lb
Vegetable/Fruit:		**K-6:**	**K-6: Adult:**	
Baked potato 5 oz, 1/25	300 each	each	250 10	40 each
Vegetable/Fruit:		**K-6:**	**K-6: Adult:**	
Carrot Sticks	12.5 lb	1/8 c	235 5	1/2 lb
Broccoli Flowers	13 lb	1/8 c		1/2 lb
Cherry Tomatoes	11 lb	1/8 c		1 lb
Vegetable/Fruit:		**K-6:**	**K-6: Adult:**	
Cherry Cobbler, C-6	500 each, 20 pans (25 serv/pan)	1 square	485 15	
Grains/Breads:		**K-6:**	**K-6: Adult:**	
Whole-Wheat Roll	12 lb 6 oz	1 each	195 10	15 each
Grains/Breads:				
Condiments/Dressing:		**K-6:**	**K-6: Adult:**	
Lowfat Ranch Dressing	350	each	300 10	10
BBQ Sauce	305	portion pack	290 5	
Milk:		**K-6**	**K-6: Adult:**	
Whole	10	1/2 pint	5 —	5 (1/2 pts)
2%				
1%	90		85 —	5 (1/2 pts)
Nonfat (Skim)	200		195 5	
Chocolate 1/2%	200		200 —	

Sample Format #3

Nutrient-Based Production Record

Site _____ **Meal Date** _____

* **Portion size:** Must be same as planned. Use separate line if adjusted for age.
** **Amount of food used:** Based on USDA Food Buying Guide or USDA recipe or CN Database item.

MENU

Menu Item Used and Form	Recipe or Product (name or #)	Person Responsible	Age or Grade Group	Portion Size* (#/wt./qty.)	Student Projected Servings	Total Projected Servings	Amount of Food Used** (lb. or qty.)	Actual: Student Servings	Actual: A la carte Servings	Actual: Adult Servings	Actual: Leftovers	If Sub or Leftover ✓

Sample Format #4

Nutrient-Based Production Record

Site _____ **Meal Date** _____

* **Portion size:** Must be same as planned. Use separate line if adjusted for age.
** **Amount of food used:** Based on USDA Food Buying Guide or USDA recipe or CN Database item.

Menu

Menu Item	Food Used and/or Recipe # (Check if USDA)	Age-Grade	Portion Size* (#/wt./qty.)	Age-Grade	Portion Size	Student Projected Servings	Total Projected Servings	Amount of Food Used** (lb. or qty.)	Estimated Amount Leftover	If Sub or Leftover ✓
Entree(s)										
Other Item(s)										
Milk										

Actual # Reimbursable Meals Served:

Age/Grade _____ : _____
Age/Grade _____ : _____
Age/Grade _____ : _____
Total: _____

Actual # Nanreimbursable

Adults: _____
Prag. Adults: _____
Total: _____

Extra Items/Sales:

Milk _____ 1/2 pints and/ar $ _____
Other items _____ # items and/ar $ _____

Completed Sample Format #3

Nutrient-Based Production Record

Site Summitville Elementary **Meal Date** May 14, 1998

* **Portion size:** Must be same as planned. Use separate line if adjusted for age.
** **Amount of food used:** Based on USDA Food Buying Guide or USDA recipe or CN Database item.

Menu

Salisbury Steak w/ Whole-Wheat Roll
-or- Chicken Nuggets, BBQ Sauce

Baked Potato
or Fresh Veggies — Lowfat Ranch Dressing

Cherry Cobbler
Milk

Menu Item Used and Form	Recipe or Product (name or #)	Person Responsible	Age or Grade Group	Portion Size* (#/wt./qty.)	Student Projected Servings	Total Projected Servings	Amount of Food Used** (lb. or qty.)	Student Servings (Actual)	A la carte Servings (Actual)	Adult Servings (Actual)	Leftovers (Actual)	If Sub or Leftover ✓
Salisbury Steak	D-23	Sue	K-6	1 each	200	220	220 serv	195		10	15 serv	
Chicken Nuggets	Brand X	Yolanda	K-6	5 ea/4 oz	300	305	76-1/4 lb	290		5	2.5 lb	
Baked Potato, 5 oz, 1/25		Akiko	K-6	1 each	300	300	300 each	250		10	40 each	
Carrot Sticks		Akiko	K-6	1/8 c	250	250	12.5 lb	235		5	1/2 lb	
Broccoli Flowers		Akiko	K-6	1/8 c	250	250	13 lb	235		5	1/2 lb	
Cherry Tomatoes		Akiko	K-6	1/8 c	250	250	11 lb	235		5	1 lb	
Cherry Cobbler	C-6	Yolanda	K-6	25 serv/pan 1 square	500	500	20 pans	485		15	—	
Whole Wheat Roll	Brand Y	Yolanda	K-6	1 each	200	220	12 lb 6 oz	195		10	15 each	
BBQ Sauce	Brand Z	Akiko	K-6	1 portion pk	300	305	305 each	290		5	10 each	
Lowfat Ranch Dressing	Brand Q	Akiko	K-6	1 portion pk	350	350	350 each	300		10	40 each	
Milk, Variety		Sue	K-6	1/2 pint	500	500	500 (1/2 pints)	485		5	10 (1/2 pts)	

Completed Sample Format #4

Nutrient-Based Production Record

Site Summitville Elementary **Meal Date** May 14, 1998

* **Portion size:** Must be same as planned. Use separate line if adjusted for age.
** **Amount of food used:** Based on USDA Food Buying Guide or USDA recipe or CN Database item.

Menu

Salisbury Steak w/ Whole-Wheat Roll
-or- Chicken Nuggets w/ BBQ Sauce

Baked Potato
-or- Fresh Veggies Lowfat Ranch Dressing

Cherry Cobbler
Milk

Menu Item	Food Used and/or Recipe # (Check if USDA)	Age-Grade	Portion Size* (#/wt./qty.)	Age-Grade	Portion Size	Student Projected Servings	Total Projected Servings	Amount of Food Used** (lb. or qty.)	Estimated Amount Leftover	If Sub or Leftover ✓
Entree(s)										
Salisbury Steak	D-23	K-6	each			200	220	220 serv	15 serv	
Chicken Nuggets	Brand X		5 each or 4 oz			300	305	76-1/4 lb	2.5 lb	
Other Item(s)										
Baked Potato	5 oz, 1/25	K-6	each			300	300	300 each	40 each	
Carrot Sticks, Broccoli Flowers, and Cherry Tomatoes	3/8 c total (fresh, pre-cut 1/8 c each)		1/8 c each veg (carrots, broccoli, tomatoes)			250	250	12.5 lb car 13 lb broc 11 lb tom	1/2 lb 1/2 lb 1 lb	
Cherry Cobbler	C-6		1 square (25 serv/pan)			500	500	20 pans	—	
Whole-Wheat Roll	Brand Y		each			200	220	220 each	15 each	
BBQ Sauce	portion pk		each			300	305	305 each	10 each	
Lowfat Ranch Dressing	portion pk		each			350	350	350 each	40 each	
Milk										
Variety		K-6	1/2 pint			500	500	500 (1/2 pts)	10	

Actual # Reimbursable Meals Served:

Age/Grade K-6 : 485
Age/Grade _____ : _____
Age/Grade _____ : _____
Total: 485

Actual # Nonreimbursable

Adults: 15
Prog. Adults: _____
Total: 15

Extra Items/Sales:

Milk 0 1/2 pints and/or $ 0
Other items None # items and/or $ 0

Recipe Name: _____

Ingredients	Servings		Servings		Preparation Directions
	Weight	Measure	Weight	Measure	

YIELD: _____ SERVING SIZE: _____

MANUFACTURERS' DATA SUBMISSION FORM

For directions on how to fill out this form, see reverse side.

1. *Product Identification*

PRODUCT NAME: _____
Brand _____
Product code _____
List CN Label number if appropriate_____
Is this product in the Child Nutrition (CN) Database?
CN DATABASE = Yes_____ No_____

2. *Package Size and Servings Per Package*

Package Size = ___ grams ___lbs. ___fl. oz.
Standard Serving Size = _____
Number of Servings Per Package = _____

3. *Basis for Nutrient Data*

Nutrient data is being given: (Check one)
___ As Served ___ As Purchased
Analysis is based on: (Check one)
___ Per Serving ___ 100 grams
Weight per serving = _____ grams

4. *Individual Values of Nutrients and Dietary Components*

If you *do not* have information on a nutrient, write "M" or "missing." If this product *does not contain* a particular nutrient, write "0."

Calories	___ kcal	Protein	___ grams
Total fat	___ grams	Saturated fat	___ grams
Carbohydrates	___ grams	Sodium	___ milligrams
Total dietary fiber	___ grams	Cholesterol	___ milligrams

Calcium ..... ___ milligrams -*or*- ____% DV (Daily Value)
Iron ..... ___ milligrams -*or*- ____% DV
Vitamin C ..... ___ milligrams -*or*- ____% DV
Vitamin A ..... ___ IU -*or*- ___RE -*or*- ____% of DV
IU = International Units, RE = Retinol Equivalents

5. *Fat and Moisture Gain/Loss*

When this product is prepared, there is a:
Fat change (+/-) ___% Moisture change (+/-) _____%

6. *Special Instructions for Preparation (if appropriate)*

To prepare this product, the manufacturer recommends: _____
_____

HOW TO FILL OUT THIS FORM:

USDA has developed this standardized form to help schools obtain information on foods they will be serving to children. They will use this information to develop recipes, analyze menus for nutritional value, and prepare products for lunch or breakfast.

1. Product Identification: List name of product (and brand, if appropriate). Also list product code if possible. If you know the product has a CN Label number, list that as well. Check yes or no for CN Database.

2. Package Size and Servings Per Package: Write in package size as appropriate in grams, pounds, or fluid ounces. Indicate standard serving size and number of servings per package.

3. Basis for Nutrient Data: Indicate with a check mark whether you are submitting nutrient data for this product on an "As Served" or "As Purchased" basis. Use the **"As Served"** basis for any food that *does not have*: (1) any ingredients added in preparation or (2) any fat absorbed during preparation.

Use the **"As Purchased"** basis for any food that: (1) has ingredients added in preparation (such as milk, eggs, and oil added to baked product mixes); (2) is prepared by frying; (3) can be prepared in varying ways (for example, a food that can be baked *or* fried); or (4) gains or loses moisture/fat during preparation.

In addition, indicate whether nutrient analysis is based on 100 grams or per serving. Also indicate weight per serving.

4. Individual Values of Nutrients and Dietary Components: Please fill out completely, leaving no lines blank. (1) If you have information on a nutrient, write the specific value in the unit of measurement indicated. (2) If you do *not* have information on a nutrient, write "M" or "missing." (3) If this product *does not contain* a particular nutrient, write "0."

5. Fat and Moisture Gain/Loss: If you checked "As Purchased" above, also fill in this section if there is a fat or moisture change during preparation.

(Fat may be gained or lost in cooking some foods, thereby changing the foods' nutrient value. Methods of preparation such as breading, frying, or baking affect this fat gain or loss. For example, chicken baked in the oven will lose fat during cooking, while batter-coated or breaded chicken that is deep fried will gain fat. If fat is absorbed or gained, fat grams and calories from fat will be increased. If fat is lost, fat grams and calories from fat will be decreased.)

6. Instructions for Preparation: If appropriate, indicate instructions such as: ingredients to be added, cooking methods, cooking time, and cooking temperature.

CHAPTER 8

A MENU PLANNER FOR HEALTHY SCHOOL MEALS...

Marketing Your Product



Chapter 8

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Marketing Your Product

You've worked hard to plan quality meals and YOU know they are the best in town — for nutritional value as well as taste. How can you be sure your customers get that message? Bottom line: You need to *market* your product.

In this chapter, we'll focus on building an effective marketing plan. We'll explore ways to use promotions and merchandising to get students' attention. We'll also look at ways to reach out to teachers, parents, school administrators, and the community. It's important to get everyone involved — starting with your staff!

Your marketing plan is an investment in the future success of your food service operation. Even more important, it's an investment in children's health. By increasing customer participation and sales, you're increasing the number of times a student eats a nourishing meal.

You face stiff competition, especially from fast-food franchises who are masters at attracting customers. But you *can* influence whether a student eats in your cafeteria or somewhere else. Start with quality meals and quality service, combine these with good marketing and effective promotions, and you've got a recipe for success!



QUALITY PLUS MERCHANDISING = SUCCESS

Merchandising is the way you encourage students to buy the healthy meals you offer for breakfast and lunch. How you present food and menus is extremely important—so is how your employees present themselves and treat customers.



Having a clean, well-lighted serving line and staff in attractive uniforms signals to customers that yours is a *quality* program. Have you ever seen a fast-food franchise with poor lighting?

You must constantly deliver a message to everyone that your meals look good, taste good, and are the best bargain in town.

Building An Effective Marketing Strategy

How can you build an effective marketing strategy? Several steps are listed below. All are important, but you don't necessarily have to carry them out in the order given. In fact, many you will do simultaneously! This is just an overview — read on for more details and suggestions.

- **Commit to having a marketing plan.**
  Then look for ways to get your staff involved. Your employees' interest and enthusiasm is crucial.
- **Empower staff to achieve quality service.**
  How your staff prepares, showcases, and serves foods to customers is critical to the success of your marketing efforts. Encourage employees to consider how food looks as well as tastes.
- **Be customer-oriented.**
  Be sure employees greet customers with a smile. Learn students' names. Wear name tags so that students can greet your staff by their names, too.
- **Target your customers.**
  Make an effort to better understand your customers. Find out what students like and dislike, and what gets their attention. As you know, your competition makes great efforts to do this! For starters, you might set up a student advisory group.

- **Spread the word that school meals are a SMART choice.**
  Help students *understand* that what they eat affects their health in important ways. Market school meals as the healthy choice, and seek opportunities to get this message across in every way you can.

- **Make the most of your menus.**
  They are a direct line of communication with parents as well as students. Cultivate the natural link between the classroom and lunchroom through activities such as nutrition quizzes and games on the back of menus.

- **Use promotions creatively.**
  Promotions are an important part of an effective marketing strategy. They can be single events or a series of events, and they can accomplish a variety of goals.

  For example, you might plan a promotion to: generate excitement about your program or a particular menu; increase parents' awareness of the nutritional value of school meals; and encourage students to choose a variety of foods.

- **Get the whole school involved.**
  Offering healthy school meals is a valuable service to your community. Give everyone the chance to become involved. Seek ideas from students, parents, teachers, and school administrators. Generate excitement by inviting parents and members of the community to attend special meals and other activities.



Getting Started

You've decided to pay more attention to marketing. Start by looking around and asking yourself questions like these:

- **Can we brighten up the cafeteria and make it more fun?**
  - How can we decorate? Will students, teachers, or parents be willing to help?
  - What are the school colors? Can they be used in the cafeteria?
  - What is the school mascot? Can the mascot's name be part of the cafeteria's name?
- **Are we doing a good job displaying food?**
  - What is the first thing a student sees in the serving area?
  - How does the food look from the customer's point of view?
  - How about garnishes? Do they complement the flavor, color, and texture of the foods?
- **Are we doing a good job serving food?**
  - Does the staff serving the food know how to place it on the plate or tray so it will look attractive?
  - Are employees using the correct serving size and proper serving utensil for each food item?
  - Are pre-portioned food items being served in appropriate quantities for the grade groups being served?

Making the Most of Your Menus

Menus are important. Your customers read these every day. In fact, students often decide to purchase lunch based solely on the day's menu or the promotions announced with it.

Menus also communicate information about the program to parents, teachers, and school administrators. Because menus list selling prices of lunches and a la carte items, this is your best opportunity to show that the complete lunch is the best buy. Here are some tips:

- *Jazz up your menu writing.* For example, use lively language to describe menu items. For "hamburger" say: "Build Your Own Superburger." List "Chicken Chow Mein" or "Beef Stir-Fry" but don't stop there — call the day's lunch a "Far East Feast."
- *Send menus home with students.* Include your phone number and let parents know they can approach you.
- *Put activities on the back of menus.* And reward teachers and students for completing the activities.
- *Tell why school meals are a healthy choice.* Use menus to tell students and parents about the nutritional value of the meals you're offering.

GO AHEAD — BRAG!

Including nutrition facts on menus is a good way to let parents and students know about the nutrition goals you're working to meet. For example, tell them you're following the advice outlined in the Dietary Guidelines for Americans. You may find that many parents are already familiar with and interested in these Guidelines. They'll be pleased you are, too.

For a special promotion, print a menu that gives more detailed information about a particular nutrient or nutrients. You will find some interesting facts on key nutrients, such as food sources and contribution to good health, in Chapter 4 and Appendix 9.

Planning Successful Promotions

A promotion is an event or a series of events designed to accomplish a specific goal or goals. Promotions can be big or small, short or long, and can reach many different audiences. It's best to begin by identifying *what you want to achieve* and *who you want to reach* with this particular promotion.

For parents, for example, you might plan a short promotion for Back-to-School Night — perhaps an attractive display with a brochure on why school meals are a smart choice. To interest students, you might plan a series of festive meals, complete with costumes for your staff or classroom tasting parties.

A promotion provides an excellent opportunity to introduce new menu items. But don't overdo it — show only one new food item at a time. A total of two or three in a month is plenty! To make sure students notice:

- Make the new food item sound appealing on the printed menu.
- Offer an incentive — a reward for choosing the new food.
- Display a poster that lists the food's nutritive value.
- Introduce new foods in the classroom or plan small portions when first offering a new food.

Your efforts to get students' attention need to be ongoing. Don't skip a month because there is a lot going on. Your customers will come to expect the promotions and be disappointed if there are none.



Planning a Promotion?
THINK ABOUT THE "BIG" PICTURE!

There are lots of ways you can plan successful promotions. Use your imagination and the worksheet on page 210 to get started. Remember to think about the "big" picture — what students are interested in and what else is happening at school.

- **Select an objective and target group.** Decide what you want your marketing campaign to accomplish and who you want to reach.
- **Determine a timeframe.** Will you do a promotion for a day, a week, or an entire month?
- **Check the school's calendar.** You might want to plan promotions to coincide with or support other campus events, such as sports activities, dances, or plays. Or perhaps you want your promotion to be the week's big splash. Seasonal changes and holidays can offer opportunities for fun themes.
- **Select a title.** The title needs to get your customers' attention! "Five a Day, Give Me Five," "Pyramid Power," and "A World of New Tastes" are a few examples.
- **Plan for publicity.** You need to plan in advance how you are going to get the word out. Publicity is critical to a successful promotion. But you don't need to do all the work. Local publicity resources can help, if you initiate the contact and develop working relationships.
- **Work with student and parent advisory groups.** You may already be working with an advisory group, but if not, consider setting one up for your special promotion and other activities, too.
- **Have displays at special events and meetings.** Announce your promotion by having a display table and brochures available during activities such as health fairs, Back-to-School Night, kindergarten orientation, and parent-teacher association meetings.

A PROMOTION PLANNING WORKSHEET

1. ***Objective:***

   Activity:
   Food Items:

2. ***Target Group:*** (Circle one or more)

   Students Parents Teachers Administrators

3. ***Date(s):***

   Coincides with campus events? Holidays?

4. ***Theme and Title:***

5. ***Publicity:***

   (a) Print:
   (b) Media:
   (c) Other:

6. ***Dress/Decorations/Merchandising Tools:***

7. ***Incentives/Prizes:***

8. ***Who Is Responsible?***

9. ***Costs/Expenses:***

10. ***Evaluation:***

    Complete after your promotion by circling the appropriate numbers below.

	Poor	*Satisfactory*	*Good*	*Excellent*
How well did this promotion accomplish our objective(s)?	1	2	3	4
If a new food item was introduced, was it well received?	1	2	3	4
How did students respond?	1	2	3	4
How did staff respond?	1	2	3	4

Want to Get Students' Attention?
TRY THESE MERCHANDISING TOOLS

There are lots of merchandising tools you might use to get students' attention. Use them in combination for best results!

- **Displays**

  A variety of display equipment can work well in a school setting. Kiosks, photo boxes, and free-standing posterboards or easels are just a few. Use them to promote new menu items, advertise theme days, and spread the word that it's fun to eat at school.

  You may be able to make some display equipment yourself with help from parents, teachers, and students. USDA's *A Tool Kit for Healthy School Meals: Recipes and Training Materials* (see Appendix 3) includes a set of directions school woodworking instructors can use to lead students in building a promotional kiosk.

- **Bulletin boards**

  Do your students have time to read when they are waiting in the serving line? Bulletin boards — especially if they're fun to look at — can spark students' interest and extend an exciting invitation to learn. Designate one bulletin board for monthly promotions and one for general nutrition. You might be surprised at how interested students are!

- **Costumes or special accessories**

  When you're doing a promotion, have your staff dress for success! Make an event fashionable and fun with employees wearing buttons, aprons, hats, T-shirts, or costumes. You can make your own costumes or borrow or rent them.

- **Posters and banners**

  Perfect for a wall or even the wide side of a salad bar, banners can help add color and excitement to your cafeteria setting. Plus, they are inexpensive to do!

- **Signs**

  When trying to expand your customer base, place signs outside the cafeteria and in other areas around the school campus.

- **Static-cling decorations**

  Use them to decorate your cafeteria, to add color, or to create a mood for a special theme day. Static-decorations are easy to do and you can save and reuse them.

- **Music and props**

  Music can help set the stage for theme days, but it's great for regular days, too. Play music in the cafeteria while students are eating. Use music on the intercom system to get students' attention during morning announcements. Bring music from home, get it from your local library, or check the school library for possibilities.



Want to Get Students' Attention?
USE PRIZES AND SURPRISES

Students love prizes and surprises! Use them to increase participation, reward young children for selecting new food items, and in general to make eating at school fun. Here are some ideas:

"Reach Into the Surprise Can"
Make school lunch a special occasion with a "Surprise Can." Each student who buys a complete school lunch (instead of a la carte items) gets to reach in and take a card. The lucky winner's card would announce a small prize.

Water Bottles, Fanny Packs, Frisbees, T-Shirts
Promote healthy exercise and eating habits by giving larger prizes. Look for sources of promotional materials, such as local sports stores and athletic associations.

Frequent Customer Card
Plan a frequent customer card program. When a student's card is stamped completely, he or she receives a prize.

Lucky Sticker Day
Young children love stickers. When they try new foods, reward them with a sticker. Use stickers to add excitement to the lunchline — put stickers on some of the trays and give small prizes to the lucky students who get them.

Pencils for Learning
Plan a word game that features foods for a healthy diet and give out pencils to students who play.

Poster Contest
Challenge elementary students to have a poster contest. The winning class gets a private party in the cafeteria with tablecloths and decorations.

"Wake Up to Nutrition"
Add excitement by telling students an alarm clock or timer will go off sometime during the meal service. Whoever is at the cash register when the buzzer sounds will get a prize or free food item.

Magnets to Take Home
At the beginning of the school year, give refrigerator magnets to students for posting school menus at home. Magnets featuring your logo help students and parents remember your program throughout the school year. And, if you don't have a logo, consider developing one!

Special Visitor
Invite a celebrity, such as a professional athlete, to dine with your students or have a costumed mascot visit the cafeteria. A staff member or parent volunteer can wear the costume and give a pep talk to get students involved in and excited about what's happening in their meal programs.

"Take a Taste"
Invite students to take a taste. For example, give out food samples at the entrance to the cafeteria or at the beginning of the serving line. (For added fun, have a costumed mascot offer samples to students waiting in line.) Have classroom or lunchroom tasting parties and let the students sample new items in advance. And use that feedback!



Generating Interest

School meals ARE the best choice for taste and good health. That's the message you want to get out in every way — and as often — as you can. Here are some tips for generating interest in your program. Use them to reach students, parents, teachers, and the larger community, too. These tips may also give you ideas for publicizing a particular promotion or enticing students to learn more about eating for good health.

- **Place information in mailings or handouts to parents.**
  See if you can include information in the principal's letter or perhaps in mail-outs by the parent-teacher association.

- **Reach out to student and local newspapers.**
  Offer a story idea — or an actual feature — to a local newspaper or campus newsletter. High school journalism students might enjoy helping you write the article. For a byline, they might even volunteer to write it themselves.

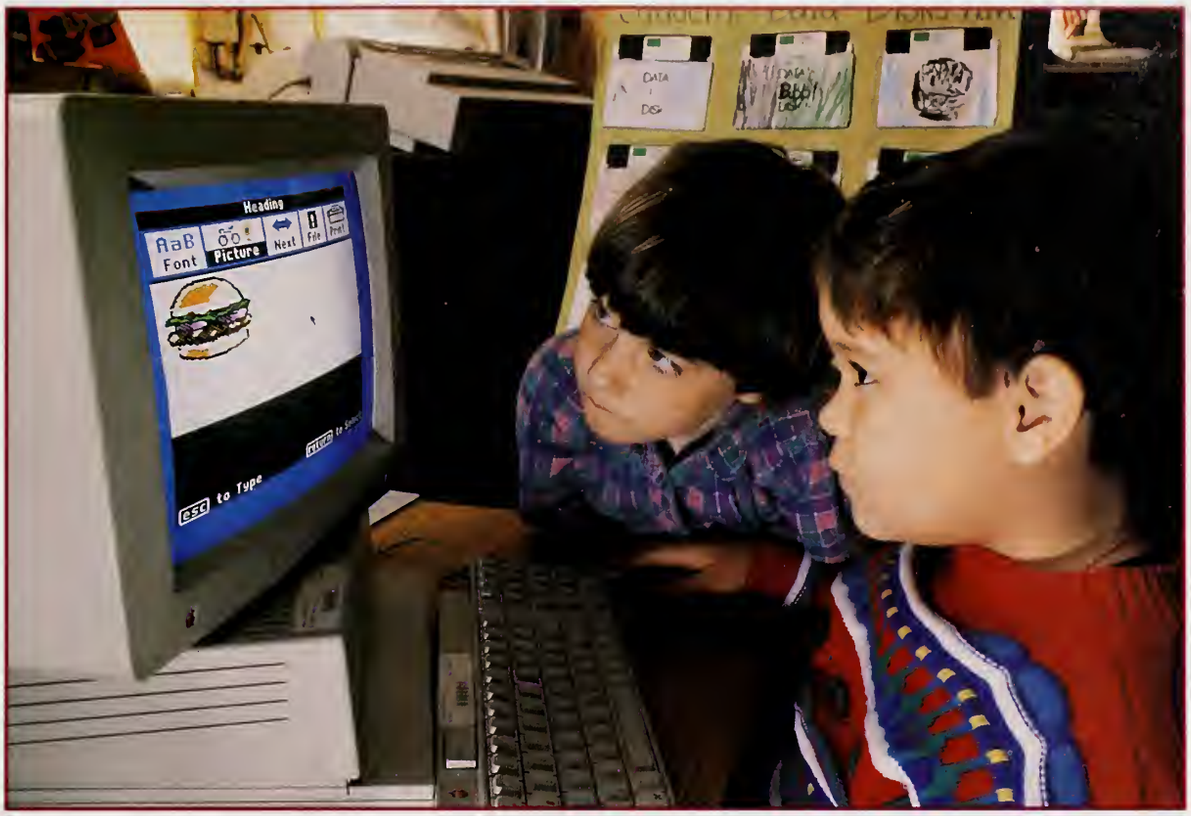
  Contact local newsletter editors or writers. Tell them you can provide information in whatever form they prefer — short items for a regular "nutrition news" column or longer pieces that can be reproduced in their entirety. A note of caution: If you're not preparing the materials yourself, be sure to check that there are no copyright restrictions on what you're offering.

  Many of your promotions will create great photo opportunities. Make sure student reporters and local newspaper staff know about them. Also have a camera on hand so you can take photos, too.

- **Take advantage of word-of-mouth publicity.**
  Look for opportunities to spread the word informally. For example, talk with students and teachers as they go through the line; visit the school nurse and health educators; talk with coaches.

- **Use flyers, invitations, and brochures.**
  Place a brochure describing your program, hours of operation, and meal prices in a clear acrylic stand in all the school's main offices. Give brochures to school district business managers, principals, superintendents, and presidents of parent groups. Set up display tables during special events.

- **Publicize activities with signs and the school's intercom system.**
  To publicize special promotions, put up signs several days in advance in places where students will be sure to see them. Follow up with announcements on the intercom several times for emphasis.



- **Form a student nutrition advisory committee.**
  A student advisory committee can help you in a variety of ways, including with menu changes. Include parents, teachers, administrators, and child nutrition staff as well. Making a committee successful can be time-consuming, but positive results will make the effort worthwhile.

  Be sure to use or respond to the group's major suggestions. Also, when appropriate, be sure to involve administrators in any changes affecting serving times or procedures.

- **Sponsor school-wide nutrition games.**
  Place quiz questions in a variety of places where students and teachers might see them — for example, in teachers' mailboxes, resource and lunch rooms, and the school's main office. Give a master list of questions and answers to teachers or student leaders, who can announce the "nutrition question of the day" as an educational game.

- **Foster classroom-lunchroom links.**
  School food service professionals and teachers, especially health educators, are natural partners. Healthy meals can help students have the energy and nourishment they need to succeed in the classroom. And classroom activities can encourage children to choose foods for a healthy diet.

REACH OUT TO TEACHERS



Teachers are an important audience for your marketing plan. Ask them to help you get across the message that healthy school meals are a smart choice — for health and educational success. Give teachers information and activities they can use with their students. And be alert for opportunities to foster a classroom-lunchroom link, especially with health educators.

One activity you can easily pursue is printing nutrition activities on the back side of menus. Suggest teachers: (1) encourage students to complete the activities; (2) review the answers in class; and (3) incorporate nutrition mini-lessons.

Help teachers plan activities that are lively and fun. Encourage students to: choose a variety of foods; eat more grains, vegetables, and fruits; and be careful about getting too many calories from fat, especially saturated fat.





- **Look for resources — near and far.**
  You might be surprised to learn how many people in your community are willing to help you market healthy food choices. The produce manager of your local supermarket, for example, might help you host a classroom tasting party.

  A representative from organizations like the American Heart Association, the American Cancer Society, or the American Dietetic Association might accept an invitation to speak to teachers, students, or parents. These organizations can often provide valuable nutrition information materials as well.

  Other sources are the National Food Service Management Institute (NFSMI), USDA's Food and Nutrition Information Center (FNIC), and the American School Food Service Association (ASFSA).

- **Build on success.**
  Use your imagination and ideas from your staff or the teachers at your school to make your cafeteria the "in" place to be. Form partnerships so that several people are involved and responsible for the outcome of your marketing efforts.

  Put aside a set amount of your budget for marketing expenses each year. Start small and build according to your successes. Invest in marketing — the rewards to your program will be great!

Appendixes



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Appendixes

APPENDIX 1:
Major Features of Food-Based Menu Planning: Comparing Traditional and Enhanced

TRADITIONAL	ENHANCED
1. Nutrition Goals	
Menus must meet nutrition goals when averaged over a school week and analyzed by the state agency during a state nutrition review.	Same as Traditional
2. Nutrient Standards and Age/Grade Groups	
• ***For school-age students (K-12)*** *LUNCH:* There are two established age/grade groups: Grades K-3 and Grades 4-12. There is also an optional recommended age/grade group: Grades 7-12. *BREAKFAST:* There is one established age/grade group: Grades K-12.	• ***For school-age students (K-12)*** *LUNCH:* There are two established age/grade groups: Grades K-6 and Grades 7-12. There is also an optional recommended age/grade group: Grades K-3. *BREAKFAST:* There is one established age/grade group: Grades K-12. There is also an optional recommended age/grade group: Grades 7-12.
• ***For pre-school children*** *LUNCH AND BREAKFAST:* There are two pre-school age groups: Ages 1-2 years and Ages 3-4 years.	• ***For pre-school children*** *LUNCH AND BREAKFAST:* There are two pre-school age groups: Ages 1-2 years and Ages 3-4 years.

TRADITIONAL	ENHANCED
3. Criteria for a Reimbursable Meal	
Provides the required food components and food items in the correct serving sizes to meet the appropriate *Traditional* meal pattern. - Four food components for lunch. - Five food items for lunch. - Three or four food components for breakfast. - Four food items for breakfast.	Provides the required food components and food items in the correct serving sizes to meet the appropriate *Enhanced* meal pattern. - Four food components for lunch. - Five food items for lunch. - Three or four food components for breakfast. - Four food items for breakfast.
4. Meal Structure for Lunch	
The following are minimum requirements for school-age students by age/grade group for each of the four components: Meat/Meat Alternate; Grains/Breads; Vegetables/Fruits; and Milk.	
• ***Meat/Meat Alternate:*** *Grades K-3:* 1-1/2 oz. *Grades 4-12:* 2 oz. *Optional (recommended)* *Grades 7-12:* 3 oz.	• ***Meat/Meat Alternate:*** *Grades K-6:* 2 oz. *Grades 7-12:* 2 oz. *Optional (recommended)* *Grades K-3:* 1-1/2 oz.
• ***Grains/Breads:*** *Grades K-3:* 8 serv. per week; minimum 1 serv. per day *Grades 4-12:* 8 serv. per week; minimum 1 serv. per day *Optional (recommended)* *Grades 7-12:* 10 serv. per week; minimum 1 serv. per day	• ***Grains/Breads:*** *Grades K-6:* 12 serv. per week; minimum 1 serv. per day *Grades 7-12:* 15 serv. per week; minimum 1 serv. per day *Optional (recommended)* *Grades K-3:* 10 serv. per week; minimum 1 serv. per day

TRADITIONAL	ENHANCED
4. Meal Structure for Lunch *(continued)*	
• ***Vegetables/Fruits:***	• ***Vegetables/Fruits:***
At least two different fruits and/or vegetables must be offered. *Grades K-3:* 1/2 cup per day *Grades 4-12:* 3/4 cup per day *Optional (recommended)* *Grades 7-12:* 3/4 cup per day	At least two different fruits and/or vegetables must be offered. *Grades K-6:* 3/4 cup per day plus additional 1/2 cup per week *Grades 7-12:* 1 cup per day *Optional (recommended)* *Grades K-3:* 3/4 cup per day
• ***Milk:***	• ***Milk:***
For all age/grade groups: 8 ounces fluid milk as a beverage	*For all age/grade groups:* 8 ounces fluid milk as a beverage
5. Meal Structure for Breakfast	
The following are minimum requirements for school-age students by age/grade group for each of the three or four components: Meat/Meat Alternate and/or Grains/Breads; Juice/Fruit/Vegetable; and Milk.	
• ***Meat/Meat Alternate and/or Grains/Breads:***	• ***Meat/Meat Alternate and/or Grains/Breads:***
Grades K-12: Two servings of Meat/Meat Alternate (1 ounce per serving) or two servings of Grains/ Breads or one of each	*Grades K-12:* Two servings of Meat/Meat Alternate (1 ounce per serving) or two servings of Grains/ Breads or one of each *Optional (recommended)* *Grades 7-12:* Same as Grades K-12 plus one additional serving of Grains/Breads.

TRADITIONAL	ENHANCED
5. Meal Structure for Breakfast (continued)	
• ***Juice/Fruit/Vegetable:***	• ***Juice/Fruit/Vegetable:***
Grades K-12: 1/2 cup	*Grades K-12:* 1/2 cup (Same for Grades 7-12, Optional)
• ***Milk:***	• ***Milk:***
Grades K-12: 8 oz. fluid milk as a beverage or on cereal or both	*Grades K-12:* 8 oz. fluid milk as a beverage or on cereal or both (Same for Grades 7-12, Optional)
6. Offer versus Serve for Lunch	
Required for senior high schools. High school students must take no fewer than three of the required five food items. They get to choose which item(s) to decline. Optional for lower grades. (School food authorities decide whether to have OVS.)	Same as Traditional
7. Offer versus Serve for Breakfast	
Optional for senior high schools. Optional for lower grades. Students may decline one food item from any food component.	Same as Traditional

TRADITIONAL	ENHANCED
8. Standardized Recipes	
A record and copy of recipes used must be available during state nutrition review and analysis.	Same as Traditional
9. Processed Foods	
A record of products used must be on file. Child Nutrition label or other documentation will assist in determining food credit of food components and serving sizes. Nutrition facts labels and/or manufacturer's nutrient data sheets will be needed during state nutrition review.	Same as Traditional
10. Production Records	
Program regulations require schools to keep food production and menu records.	Same as Traditional
11. Child Nutrition Labeling	
Child Nutrition (CN) labels on products show the product's contribution toward meal pattern requirements.	Same as Traditional

APPENDIX 2:
Major Features of Nutrient-Based Menu Planning: Nutrient Standard Menu Planning (NSMP) and Assisted NSMP

NSMP and Assisted NSMP use computerized nutrient analysis to plan menus. When averaged over a school week, this menu analysis must meet the nutrient standards for specific age/grade groups.

NSMP and Assisted NSMP are basically the same. With Assisted NSMP, however, an outside consultant or other agency (such as the state agency or another school district) does the menu planning and nutrient analysis based on local preferences.

1. Nutrition Goals

Menus must meet nutrition goals when averaged over a school week.

Requires computerized nutrient analysis of planned menus for: RDA (Recommended Dietary Allowances) for key nutrients; calories; and Dietary Guidelines measures. USDA-approved software must be used for the computerized nutrient analysis.

2. Nutrient Standards and Age/Grade Groups

Minimum of two established age/grade groups: Grades K-6 and Grades 7-12 (plus optional third group for Grades K-3). There are different nutrient standards for each of these three groups.

Optional *established age groups* and nutrient standards.

Optional *customized age groups* and nutrient standards.

3. Criteria for a Reimbursable Meal

Contains at least three menu items.

Meets the nutrient standards for the appropriate grade or age groups when averaged over 1 school week's menu.

4. Meal Structure for Lunch

A minimum of three menu items must be offered: an entree, milk, and at least one side dish.

- Offer an entree: the entree is a single food item or a combination of foods served as the main dish.
- Offer fluid milk as a beverage.
- Offer at least one side dish; may be any food item except a condiment or a food of minimal nutritional value that is not part of a menu item.

5. Meal Structure for Breakfast

A minimum of three menu items must be offered: milk and at least two side dishes.

- Offer fluid milk as a beverage or on cereal or both.
- Offer at least two side dishes; may be any food items except a condiment or a food of minimal nutritional value that is not part of a menu item.

6. Offer versus Serve for Lunch

Required for senior high schools. Optional for lower grades.

- Schools must offer students at least three menu items: an entree, fluid milk, and another menu item.
- Students must select at least two of the three menu items. One of the two menu items selected must be an entree.
- If more than three menu items are offered as a meal unit, students may decline no more than two menu items of the meal unit. (Students can never decline the entree.)

7. Offer versus Serve for Breakfast

Optional for all grade levels.

Students may decline a maximum of one menu item out of the three or more required menu items offered.

8. Standardized Recipes

Required for all menu items that have two or more ingredients or that require any preparation.

9. Processed Foods

Record of products used must be on file.

Nutrient analysis of product must be in the USDA database or entered into the local database.

10. Production Records

Program regulations require schools to keep food production and menu records.

11. Child Nutrition Labeling

CN Labeling does not apply to NSMP and Assisted NSMP because these systems do not use meal patterns. However, schools can serve CN-labeled products in meals planned with NSMP or Assisted NSMP.

APPENDIX 3:
Resource Materials

Appendix 3 provides information on a variety of resource materials available from: the U.S. Department of Agriculture's Food and Nutrition Service (FNS); the American School Food Service Association (ASFSA); the National Food Service Management Institute (NFSMI); the Food and Nutrition Information Center (FNIC); and the Healthy School Meals Resource System website on the Internet.

1. USDA Training and Technical Assistance Materials

- **School Lunch Challenge I, II, and III Recipes**

  Winning low-cost, popular recipes developed by a chef/school food service team in conjunction with a nationwide competition sponsored by the American Culinary Federation. (1996)

  Distributed to school districts nationwide, to Team Nutrition (TN) Schools in their TN Resource Kit, and to state agencies. The recipes are available on the Healthy School Meals Resource System website (see page 235 for address).

- **A Tool Kit for Healthy School Meals: Recipes and Training Materials**

  This kit includes: 53 recipes that meet the Dietary Guidelines for Americans; a promotion guide; and a training manual with instructions on preparing, modifying, and standardizing recipes. Each recipe includes a nutrient analysis. (1995)

  Distributed to schools nationwide. Additional copies available for purchase from the National Food Service Management Institute (NFSMI) at 1-800-321-3054.

- **Healthy School Meals Training**

  A trainer's guide containing approximately 200 pages; also includes 180 slides and reproducible transparencies. Developed to assist state agencies and school districts in implementing the *School Meals Initiative for Healthy Children.* (1995)

  Provided to state agencies. Also available on CD-ROM by calling FNS' Nutrition and Technical Services Division at (703) 305-2556.

Training Guidelines for Healthy School Meals

A 19-page publication offering recommended topic areas, content, and tools for training school food service personnel at several levels: director, manager, food production staff, and general assistant. (1996)

Available for purchase from NFSMI at 1-800-321-3054.

Great Nutrition Adventure Action Packet

Packet includes strategies for working with chefs, as well as recipes, a video, and a resource directory of chefs nationwide who are willing to volunteer time in schools. (1996)

Provided to TN Schools in their Resource Kit. Available upon request from FNS' Child Nutrition Division at (703) 305-2609.

Choice Plus: A Reference Guide for Foods and Ingredients

A 202-page guide developed by FNS in cooperation with NFSMI. Complete with sample product descriptions, the guide provides information that can help school districts make informed decisions when purchasing food for school meals. A complimentary piece to NFSMI's "First Choice" purchasing manual. (1996)

Distributed to state agencies and one to each school food authority (SFA) nationwide. Additional copies available for purchase from NFSMI at 1-800-321-3054.

Serving It Safe: A Manager's Tool Kit

A comprehensive 239-page food service safety and sanitation training package. Kit contains a teacher's manual, teaching aids, poster, case studies, and group activities. Also includes an interactive training CD-ROM and disks. (1996)

One kit distributed to each school food authority (SFA) nationwide. Available for purchase from NFSMI at 1-800-321-3054.

Serving It Safe Poster

Colorful poster from "Serving It Safe: A Manager's Tool Kit." (1996)

Available to state agencies and school districts. Limit one poster per school. Fax order to the National Technical Information Service (NTIS) at (703) 605-6852.

- **USDA Assisted NuMenus: A Resource Guide for School Food Service Professionals**

  This publication was developed to help schools use Assisted Nutrient Standard Menu Planning (Assisted NSMP), which was briefly called Assisted NuMenus.

  It contains two 5-week lunch cycle menus (Grades K-6 and Grades 7-12) as well as one 1-week breakfast cycle menu. It also includes standardized recipes, generic food product descriptions, food preparation methods, and nutrient analysis. (1996)

  Initially made available directly to state agencies. Future availability to state agencies and school districts with a limit of one per school, while supplies last. Fax order to the National Technical Information Service at (703) 605-6852. Additional copies available for purchase from NFSMI at 1-800-321-3054.

- **Nutrient Analysis Protocols for the School Nutrition Program**

  A how-to manual on conducting a nutrient analysis. Prepared for training state nutrition reviewers. Copies are available upon request from FNS' Nutrition and Technical Services Division at (703) 305-2556.

- **Culinary Training Videos**

  "Cooking a World of New Tastes" is a set of four training videos on healthy food production for school food service personnel. Videos and accompanying guide feature USDA recipes and explore new approaches to the production of healthy foods with an emphasis on developing culinary skills. (1998)

  One kit will be distributed to each school food authority nationwide fall 1998.

- **Food Buying Guide for Child Nutrition Programs**

  Projected date available: Spring 1999. This revision of the 1984 edition will include research on new foods not found in the present guide, along with reviews of foods already listed. It will be distributed to all school food authorities and schools.

2. American School Food Service Association (ASFSA) Materials

American School Food Service Association
1600 Duke Street, 7th Floor
Alexandria, VA 22314-3436
(703) 739-3900 and 1-800-877-8822 (ASFSA's Emporium)
Fax: (703) 739-3915

- **Keys to Excellence: Standards of Practice for Nutrition Integrity**

  Assists schools in achieving nutrition integrity goals at the administrative, management, and operational levels. This tool, through its standards of quality, provides a framework for continuous program review, evaluation, and improvement. (1995)

- **Trimming the Fat**

  This step-by-step guide for modifying school menus is designed to provide both information and practice in cycle menu planning and fat modification. In addition, it helps with preparing a public relations plan to promote quality school meals. Available from ASFSA and also through local dairy councils. (1996)

- **Meeting the Challenge**

  Step-by-step approach to analyzing a child nutrition operation to determine potential resources of revenue and to critically evaluate the financial benefits of operational change. Available from ASFSA and also through local dairy councils. (1995)

3. National Food Service Management Institute (NFSMI) Materials

National Food Service Management Institute
University Avenue/Old Taylor Building, PO Drawer 188
University, MS 38677
Phone: (601) 232-7658 or (800) 321-3054
Fax: (601) 232-5615 or (800) 321-3061

- **Healthy Cuisine for Kids Training**

  For all levels of school food service personnel, this NFSMI workshop provides a hands-on training program focusing on food preparation. Workshop goal is to help program administrators improve the nutritional quality and acceptability of school meals. Lessons focus on four key areas: nutrition, basic skills and culinary techniques, flavorful foods, and food presentation.

  Includes trainer's notebook (350 pages), participant's manual and recipe books (50 pages each), and video tapes used as reference and teaching tools for training managers and food service assistants. (1995)

  For information on the workshop, the purchase of the manual (Publication ET11-95) or the video tapes, call NFSMI. (NAL call number Kit 272 & 194).

- **Champion of Change: Child Nutrition Personnel**

  Video and training material designed to assist personnel in planning for and adapting to change created by internal or external entities. Presents an overview of changes in child nutrition — past, present, and future. Discusses the necessity of change while demonstrating techniques for implementation. 60 minutes. Satellite Series. (1995)

- **Creating Healthy Menus for the Mainline, Part I**

  These video and training materials present ideas for planning and creating healthy, cost-effective, appealing menus that support the Dietary Guidelines for Americans. 60 minutes. (1994)

- **Creating Healthy Menus for the Mainline, Part II**

  These video and training materials demonstrate the use of standardized recipes, production scheduling, and production techniques to effectively implement healthy menus. 60 minutes. (1995)

- **Culinary Techniques for Healthy School Meals**

  A 13-hour training program designed to be presented by the school nutrition manager to food service assistants. Focus is on principles of food preparation, development of new culinary skills, and implementation of the Dietary Guidelines for Americans. Kit includes seven workbooks, seven videos, a coach's workbook, and training certificates. (1996)

- **Dietary Guidelines: In Your Hands**

  This video offers pointers on menu planning to implement the Dietary Guidelines for Americans, including how to modify school menus. From NFSMI's series "Managing Child Nutrition Programs to Teach Healthy Food Practices." 59 minutes. (1992)

- **Enhancing Productivity in School Food Service, Part I and Part II**

  Presents eight principles for improving productivity (work simplification) and a five-step problem-solving process for increasing efficiency and program effectiveness. Part I presents two of the eight principles; Part II presents the remaining six. Each video is 60 minutes. (1996)

First Choice

A 200-page purchasing systems reference manual for school food service. Explores technical expertise of business partners and purchasing specialists; also examines innovative purchasing systems and use of market research. (1995)

Get Ready, Get Set, Go for Quality Food Service

Breakfast Lunch Training (BLT) module contains manual and videotape designed for school food service managers to use in employee training. Module defines Value Added Productivity and describes the process to achieve it; also covers preparing items using a batch process. Ready-to-use food production and product comparison forms are included. (1994)

Go for the Gold with Customer Service

Lessons stress the importance of meeting customer needs and having quality food, attractive serving lines, and caring and compassionate employees. Includes instructor's handbook and 16-minute video. (1994)

Healthy Cooking for Kids

Part of Breakfast Lunch Training (BLT), "Healthy Cooking for Kids" contains a manual and video designed to introduce new techniques and refine traditional methods. It is aimed at helping schools create healthier, great tasting meals that meet the goals of the *School Meals Initiative for Healthy Children.* (1995)

On the Road to Professional Food Preparation

This video includes lessons on weights and measures; portion control; and interpreting and adjusting recipes. Part of BLT series. 20 minutes. (1993)

Participation: The Key to Healthy Food Practices

This video provides a customer-centered team approach to participation; identifies factors that influence participation; and highlights the best participation practices across the country. From NFSMI's series, "Managing Child Nutrition Programs to Teach Healthy Food Practices." 58 minutes. (1994)

- **Preparation and the Dietary Guidelines**

  This video focuses on how to prepare attractive and acceptable meals. It discusses preparation factors such as standardized recipes, weights and measures, and appropriate equipment. From NFSMI's series "Managing Child Nutrition Programs to Teach Healthy Food Practices." 59 minutes (1993)

- **Promoting Healthy Food Practices**

  This video provides practical guidance for marketing and promoting healthy food practices. It features many examples of program promotions from around the country. From NFSMI's series "Managing Child Nutrition Programs to Teach Healthy Food Practices." 60 minutes. (1993)

4. Food and Nutrition Information Center (FNIC)

A variety of resource materials are available from FNIC. To inquire, call or write FNIC at the following address:

Food and Nutrition Information Center
National Agricultural Library, Room 304
10301 Baltimore Boulevard
Beltsville, MD 20705-2351
Phone: (301) 504-5719
Fax: (301) 504-6409
web site: http://www.nal.usda.gov/fnic
e-mail: fnic@nalusda.gov

5. Healthy School Meals Resource System

An Internet site offering online access to many resources. A discussion group called "MealTalk" enables participants to ask questions or share information. The web address is: http://schoolmeals.nal.usda.gov:8001

APPENDIX 4:
Grains/Breads Instruction

Appendix 4 includes the wording of the revised Grains/Breads Instruction issued by the U.S. Department of Agriculture's Food and Nutrition Service (FNS) on January 8, 1997. (FCS Instruction Number 783-1, REV.2, 1-8-97)

FCS Instruction Number 783-1 REV.2 1-8-97
U.S. Department of Agriculture
3101 Park Center Drive
Alexandria, VA 22302-1500

ACTION BY: Regional Directors
Nutrition and Technical Services
Special Nutrition Programs

SOURCE CITATION: Sections 210.10, 210.10a, 220.8, 220.8a, 225.16, and 226.20

The Grains/Breads Requirement for the Food-Based Menu Planning Alternatives in the Child Nutrition Programs

The food-based menu planning alternatives in the Child Nutrition Programs (i.e., the National School Lunch Program (NSLP), the School Breakfast Program (SBP), the Child and Adult Care Food Program (CACFP), and the Summer Food Service Program (SFSP) contain a requirement that all meals offered include grains/breads or bread/bread alternate food item(s), hereafter termed "grains/breads." Program regulations set forth the minimum quantities of grains/breads required for breakfasts, lunches, suppers and supplements (snacks) to be reimbursable. This Instruction sets forth the criteria to be used to determine acceptable grains/breads, the criteria to be used to determine equivalent minimum serving sizes, and examples of foods that qualify as grains/breads for meals served under the food-based menu planning alternatives in all Child Nutrition Programs.

I CRITERIA FOR DETERMINING ACCEPTABLE GRAINS/BREADS UNDER THE FOOD-BASED MENU PLANNING ALTERNATIVES

The following criteria are to be used as a basis for crediting items to meet the grains/breads requirement under the food-based menu planning alternatives:

A All grains/breads items must be enriched or whole-grain, made from enriched or whole-grain meal or flour, or if it is a cereal, the product must be whole-grain, enriched or fortified. Bran and germ are credited the same as enriched or whole-grain meal or flour.

B The label must indicate that the product is enriched or whole-grain; made from enriched or whole-grain meal or flour as well as bran and/or germ; or fortified. If it is enriched, the item must meet the Food and Drug Administration's Standards of Identify (21 CFR Section 136, 137, 139) for enriched bread, macaroni and noodle products, rice, or cornmeal.

C The item must be provided in quantities specified in the regulations. One-quarter (1/4) of a serving is the smallest amount allowable to be credited toward the minimum quantities of grains/breads specified in program regulations.

II CRITERIA FOR DETERMINING EQUIVALENT MINIMUM SERVING SIZES

Exhibit A, attached, contains the equivalent minimum serving sizes for a wide variety of purchased food items.

In lieu of using the minimum serving sizes listed in Exhibit A, the contribution of a grains/breads in a recipe may be calculated to determine the number of grains/breads servings the recipe provides. The crediting of a food item as a grains/breads serving is determined by the total amount of enriched or whole-grain meal and/or flour in the recipe divided by the number of servings the recipe yields. Bran and germ are calculated in the same manner as enriched or whole-grain meal and flour.

For the types of food items listed in Groups A-G of Exhibit A to count as one full serving, an item must contain no less than 14.75 grams (0.52 ounces) of enriched or whole-grain meal and/or flour. For the types of food items listed in Groups H and I of Exhibit A to count as one full serving, the weights and volumes listed therein must be used.

III FOODS THAT QUALIFY AS GRAINS/BREADS

Foods that qualify as grains/breads for the Child Nutrition Programs are foods that are enriched or whole-grain or made from enriched or whole-grain meal or flour. Bran and germ are credited the same as enriched or whole-grain meal or flour. Such foods include, but are not limited to:

A ***Breads*** that are enriched or whole-grain.

B ***Biscuits, bagels, rolls, tortillas, muffins, or crackers*** made with enriched or whole-grain meal or flour.

C ***Cereal grains (cooked) such as rice, bulgur, oatmeal, corn grits, wheat or couscous*** that are enriched or whole-grain.

D ***Ready-to-eat breakfast cereals*** that are enriched, whole-grain, or fortified.

E ***Cereals or bread products that are used as an ingredient in another menu item such as crispy rice treats, oatmeal cookies or breading on fish or poultry*** when they are enriched, whole-grain, or fortified.

F ***Macaroni or noodle products (cooked)*** made with enriched or whole-grain flour. Program regulations for the NSLP and the SFSP allow enriched macaroni products that have been fortified with protein to be counted to meet either a grains/breads or meat/meat alternate requirement but not as both in the same meal.

G ***Sweet foods such as toaster pastries, coffee cake, doughnuts, sweet rolls, cookies, cakes, or formulated grain-fruit products (authorized under Appendix A of 7 CFR part 220)*** when made with enriched or whole-grain meal or flour and served, as permitted under Exhibit A. When sweet foods are permitted, no more than one grains/breads serving per day may be a dessert and sweet snack foods should not be served as part of a snack more than twice a week.

H ***Pie crust*** when made with enriched or whole-grain meal or flour and served, as permitted under Exhibit A.

I ***Non-sweet snack products such as hard pretzels, hard breadsticks, and chips*** made from enriched or whole-grain meal or flour.

RONALD J. VOGEL
Acting Deputy Administrator
for Special Nutrition Programs

Attachment

FCS INSTRUCTION 783-1
REV. 2
EXHIBIT A

GRAINS/BREADS FOR THE FOOD-BASED MENU PLANNING ALTERNATIVES IN THE CHILD NUTRITION PROGRAMS[1]

GROUP A	MINIMUM SERVING SIZE FOR GROUP A
• Bread type coating • Bread sticks (hard) • Chow mein noodles • Crackers (saltines and snack crackers) • Croutons • Pretzels (hard) • Stuffing (dry) Note: Weights apply to bread in stuffing.	1 serving = 20 gm or 0.7 oz 3/4 serving = 15 gm or 0.5 oz 1/2 serving = 10 gm or 0.4 oz 1/4 serving = 5 gm or 0.2 oz
GROUP B	**MINIMUM SERVING SIZE FOR GROUP B**
• Bagels • Batter type coating • Biscuits • Breads (white, wheat, whole wheat, French, Italian) • Buns (hamburger and hotdog) • Crackers (graham crackers - all shapes, animal crackers) • Egg roll skins • English muffins • Pita bread (white, wheat, whole wheat) • Pizza crust • Pretzels (soft) • Rolls (white, wheat, whole wheat, potato) • Tortillas (wheat or corn) • Tortilla chips (wheat or corn) • Taco shells	1 serving = 25 gm or 0.9 oz 3/4 serving = 19 gm or 0.7 oz 1/2 serving = 13 gm or 0.5 oz 1/4 serving = 6 gm or 0.2 oz

GROUP C	MINIMUM SERVING SIZE FOR GROUP C
• Cookies[2] (plain) • Cornbread • Corn muffins • Croissants • Pancakes • Pie crust (dessert pies[2], fruit turnovers[3], and meat/meat alternate pies) • Waffles	1 serving = 31 gm or 1.1 oz 3/4 serving = 23 gm or 0.8 oz 1/2 serving = 16 gm or 0.6 oz 1/4 serving = 8 gm or 0.3 oz
GROUP D	**MINIMUM SERVING SIZE FOR GROUP D**
• Doughnuts[3] (cake and yeast raised, unfrosted) • Granola bars[3] (plain) • Muffins (all, except corn) • Sweet roll[3] (unfrosted) • Toaster pastry[3] (unfrosted)	1 serving = 50 gm or 1.8 oz 3/4 serving = 38 gm or 1.3 oz 1/2 serving = 25 gm or 0.9 oz 1/4 serving = 13 gm or 0.5 oz
GROUP E	**MINIMUM SERVING SIZE FOR GROUP E**
• Cookies[2] (with nuts, raisins, chocolate pieces and or/fruit purees) • Doughnuts[3] (cake and yeast raised, frosted or glazed) • French toast • Grain fruit bars[3] • Granola bars[3] (with nuts, raisins, chocolate pieces and or/fruit) • Sweet rolls[3] (frosted) • Toaster pastry[3] (frosted)	1 serving = 63 gm or 2.2 oz 3/4 serving = 47 gm or 1.7 oz 1/2 serving = 31 gm or 1.1 oz 1/4 serving = 16 gm or 0.6 oz

1. Some of the following foods, or their accompaniments may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.

2. Allowed only for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP.

3. Allowed for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP, and for breakfasts served under the SBP, SFSP and CACFP.

4. Refer to program regulations for the appropriate serving size for supplements served to children aged 1 through 5 in the NSLP; breakfasts served under the SBP; and meals served to children ages 1 through 5 and adult participants in the CACFP. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

GROUP F	MINIMUM SERVING SIZE FOR GROUP F
• Cake[2] (plain, unfrosted) • Coffee cake[3]	1 serving = 75 gm or 2.7 oz 3/4 serving = 56 gm or 2 oz 1/2 serving = 38 gm or 1.3 oz 1/4 serving = 19 gm or 0.7 oz
GROUP G	**MINIMUM SERVING SIZE FOR GROUP G**
• Brownies[2] (plain) • Cake[2] (all varieties, frosted)	1 serving = 115 gm or 4 oz 3/4 serving = 86 gm or 3 oz 1/2 serving = 58 gm or 2 oz 1/4 serving = 29 gm or 1 oz
GROUP H	**MINIMUM SERVING SIZE FOR GROUP H**
• Barley • Breakfast cereals (cooked)[4] • Bulgur or cracked wheat • Macaroni (all shapes) • Noodles (all varieties) • Pasta (all shapes) • Ravioli (noodle only) • Rice (enriched white or brown)	1 serving = 1/2 cup cooked (or 25 gm dry)
GROUP I	**MINIMUM SERVING SIZE FOR GROUP I**
• Ready-to-eat breakfast cereal (cold dry)[4]	1 serving = 3/4 cup or 1 oz whichever is less

1. Some of the following foods, or their accompaniments may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.
2. Allowed only for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP.
3. Allowed for desserts under the enhanced food-based menu planning alternative specified in section 210.10 and supplements (snacks) served under the NSLP, SFSP, and CACFP, and for breakfasts served under the SBP, SFSP and CACFP.
4. Refer to program regulations for the appropriate serving size for supplements served to children aged 1 through 5 in the NSLP; breakfasts served under the SBP; and meals served to children ages 1 through 5 and adult participants in the CACFP. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

APPENDIX 5:
Questions and Answers on Offer versus Serve (OVS)

1. OVS and Food-Based Menu Planning: Traditional and Enhanced

Q. What is the difference between 'choices' and 'food items'?

A. While multiple choices may be offered for various food items, the number of choices does not affect the number of food items that the menu planner establishes for any given meal as comprising a reimbursable lunch or breakfast.

The menu planner may offer several choices *within* a food item. For example, the menu planner offers students choices of milk — nonfat, lowfat, and whole — within the food item milk. Here, one food item is offered — milk — but the student has three choices.

Q. What is the minimum number of food items students must select in order for a school lunch to be considered reimbursable?

A. Senior high school students must choose at least three of the five required food items offered.

If the School Food Authority (SFA) decides to implement Offer versus Serve (OVS) in schools below the senior high school level, students must choose at least three (or four, depending on local policy) of the five required food items offered.

In non-OVS schools or grade levels, students must select all five food items in order for meal pattern requirements to be met.

Q. What is the minimum number of food items students must select in order for a school breakfast to be reimbursable?

A. If the SFA implements OVS, students must choose at least three of the four food items offered. In non-OVS schools or grade levels, all four food items must be taken in order for meal pattern requirements to be met.

Q. May the state agency mandate or prohibit OVS?

A. No. The National School Lunch Program (NSLP) requires OVS at the senior high school level for the lunch program. However, in the NSLP below senior high school level and in the School Breakfast Program (SBP) regardless of level, the authority to implement OVS is delegated *solely* to the SFA under the National School Lunch Act and the Child Nutrition Act.

Q. At levels below senior high school, may SFA's decide to implement OVS in some schools within their jurisdiction and not in others? How about in some grades and not in others? How about on some days and not others?

A. Yes. However, the SFA should consider the practicality of such decisions.

Q. Must a school with a preplate food delivery system implement OVS?

A. No. The Congressional intent is to allow students to refuse food items they do not intend to consume, thereby reducing food waste and food costs resulting from the wasted food. Generally, a preplate delivery system does not allow students the option of declining or taking a smaller portion of any one or two of the required food items.

To require schools with a preplate delivery system to convert to a system that packages food items separately just for the purpose of implementing OVS would be unreasonable and would defeat the objective to reduce costs.

Q. Is there a minimum amount of a serving that can qualify as a Grains/Breads component under OVS?

A. One-fourth of a serving is the minimum amount that may be credited toward the full Grains/Breads component. The school, however, still must offer the student at a minimum a full serving daily in order to meet the overall Grains/Breads requirement.

Q. How will students know which menu items and/or foods they must take to have a reimbursable meal?

A. Schools which elect to continue using the Traditional meal pattern will not need to change the ways they have taught children about reimbursable meals in the past. Schools deciding to use the Enhanced Food-Based system will experience little, if any, change apart from minor modifications to encourage consumption of additional Vegetables/Fruits and Grains/Breads items.

Q. Which of the following are correct statements about the OVS requirement with Enhanced Food-Based Menu Planning?

The OVS requirement with Enhanced Food-Based Menu Planning:

(a) Is an effort to reduce food waste and food cost in the cafeteria.

(b) Has not changed from the Traditional meal pattern.

(c) Must be implemented in senior high schools.

(d) Allows schools to offer a smaller portion if the full portion is declined.

(e) All of the above are correct statements.

A. Each of these statements accurately describes the OVS requirement with the Enhanced system. Therefore, the answer is: "(e) All of the above."

Q. Which of the following are correct statements about OVS requirements for a senior high school lunch using Enhanced Food-Based Menu Planning?

(a) The senior high school must offer all five required food items.

(b) Students can decline up to two of the required food items.

(c) The entree must be taken.

(d) There are no changes from the Traditional pattern.

(e) Statements (a), (b), and (d) are correct.

A. The answer is: "(e) Statements (a), (b), and (d) are correct." Statement (c) is *incorrect.*

2. OVS and Nutrient-Based Menu Planning: Nutrient Standard Menu Planning (NSMP) and Assisted NSMP

Q. What is the difference between 'choices' and 'menu items'?

A. The menu planner may offer several choices *within* a menu item. On a particular day, for example, he or she may offer students several choices of entrees — hamburger with bun, pizza, chef salad. Here, one menu item is offered — entree — but the student has three choices.

Q. How does the unit-price requirement mesh with OVS under NSMP and Assisted NSMP?

A. The requirement to price the reimbursable meal as a unit does not differ substantially from one menu planning option to another.

Under the Food-Based alternatives, the menu planner must satisfy specific component/quantity requirements. In contrast, menu planners using NSMP and Assisted NSMP determine for themselves what constitutes the meal, as long as an entree, milk, and at least one other menu item are offered at a minimum. *Under all systems, the student must be offered a complete meal and must take the minimum number of items.*

In the event that multiple choices of some menu items are available — for example, if there is more than one entree or if several types of vegetables/fruits are offered when only two are planned as part of the meal — the menu planner must convey to the student and the cashiers what needs to be taken for a complete reimbursable meal.

Q. Under NSMP and Assisted NSMP, is it acceptable for a student to take the entree and one other item if the planned meal includes the entree, milk, and three additional menu items?

A. No. In this example, the menu planner has determined that the reimbursable meal includes three menu items in addition to milk and an entree. Therefore, the student may not decline more than *two items.* The student must take the entree and at least two other menu items.

Q. How will students know which menu items and/or foods they have to take in order to have a reimbursable meal?

A. Schools which depart from the strict component/quantity requirements of the past by using NSMP and Assisted NSMP may need to alter their methods somewhat, especially if they offer extensive choices. Even in these instances, however, students will learn quickly that they must take an entree, and information about other menu items can be conveyed visually through the use of menu boards and placards.

Q. Which of these lunch meals would NOT be considered a reimbursable meal under OVS in NSMP and Assisted NSMP?*

** NOTE: Whether or not the 1/3 RDA criteria is being met is irrelevant for this exercise.*

LUNCH A:

The school offers:

Steak Sandwich
Celery Sticks
French Fries
Milk

The student chooses:

Steak Sandwich
Milk

Reimbursable under OVS? ☐ Yes ☐ No

LUNCH B:

The school offers:

Pizza
Fresh Peach
Milk

The student chooses:

Fresh Peach
Milk

Reimbursable under OVS? ☐ Yes ☐ No

LUNCH C:

The school offers:

Tacos with Lettuce and Tomato
Fruit Cocktail
Potato Rounds
Milk

The student chooses:

Tacos with Lettuce and Tomato

Reimbursable under OVS? ☐ Yes ☐ No

LUNCH D:

The school offers:

Chicken Nuggets
Tossed Salad
Dinner Roll
Milk

The student chooses:

Dinner Roll
Tossed Salad

Reimbursable under OVS? ☐ Yes ☐ No

LUNCH E:

The school offers:

Cheddar Cheese Nachos
Chicken Enchilada
Milk

The student chooses:

Cheddar Cheese Nachos
Chicken Enchilada

Reimbursable under OVS? ☐ Yes ☐ No

A. The answer is: Lunches B, C, and D are NOT reimbursable under OVS with NSMP and Assisted NSMP. In B and D, the student did not choose the entree; in C the student chose only one menu item.

The following two questions are about special circumstances with NSMP and Assisted NSMP:

Q. The cashier charges Sue Jones only $1.25 for her grilled cheese sandwich and apple because she did not take the milk and pasta salad that were also offered for the full meal price of $1.75. Is this correct? Why?

A. No. A lunch or breakfast must be priced as a unit. OVS must not affect the price.

Q. Tim Brown is not feeling well and selects two milks for lunch at Fair Oaks Elementary School, which offers OVS. Does this meal meet the criteria for a reimbursable meal? Why?

A. No. An entree must be selected in addition to another item. Only one of the selected milks can contribute toward the reimbursable meal.

Here is some background information on counting menu items under OVS with NSMP and Assisted NSMP. A question and answer follow.

Students may be offered a variety of choices for each menu item at each meal. The menu planner establishes what constitutes a reimbursable meal from among the various menu items that are offered. Here is an example:

- *A senior high school is offering the following at lunch:*

Three Entrees:
- Lasagna
- Macaroni and Cheese
- Chicken Nuggets

Four Vegetable/Fruit Side Dishes:
- Green Beans
- Oven Baked Fries
- Corn
- Fresh Apple

Three Varieties of Milk:
- Chocolate (1/2%)
- 2%
- Nonfat (skim)

Three Choices of Bread:
- Rolls
- Garlic Bread
- Bread Sticks

Three Choices of Desserts:
- Rice Pudding
- Fruit Cup
- Oatmeal Cookies

- *The menu planner determines that one entree, one serving of milk, one serving of a vegetable/fruit side dish, a bread, and a dessert constitute a reimbursable meal (five menu items).*

Q. Using this example, what is the MINIMUM the student must take under OVS at this high school? What are some possible reimbursable meals?

A. The minimum the student must take is an entree and two other menu items. There are many possible reimbursable meals, such as the following:

- Lasagna, Milk, and Green Beans
- Chicken Nuggets, Corn, and Oatmeal Cookies
- Macaroni and Cheese, Rolls, and Milk

Try to create other reimbursable meals under OVS with NSMP and Assisted NSMP.

APPENDIX 6:
The USDA Child Nutrition Labeling Program

What is the Child Nutrition Labeling Program?

The Child Nutrition (CN) Labeling Program is a voluntary Federal labeling program for the Child Nutrition Programs.

Who runs the program?

The CN Labeling Program is run by the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA) in cooperation with the following agencies:

- Food Safety and Inspection Service
- Agricultural Marketing Service
- National Marine Fisheries Service

The program is operated by FNS directly with commercial food processing firms.

How does the program work?

The program requires an evaluation of a product's formulation by FNS to determine its contribution toward meal pattern requirements. It allows manufacturers to state this contribution on their labels. The program provides a warranty against audit claims for purchasers of CN-labeled products.

What products are eligible for CN labels?

- Main dish products which contribute to the Meat/Meat Alternate component of the meal pattern requirements. Examples of these products include beef patties, cheese or meat pizzas, meat or cheese and bean burritos, egg rolls, and breaded fish portions.
- Juice and juice drink products which contain at least 50 percent full-strength juice by volume. This includes such products as grape drink, fruit punch, and juice drink bars.

To carry CN labels, eligible products must:

- Be produced under *Federal Inspection by USDA or USDC.*
- Have the contribution of Meat/Meat Alternate products determined using yields in the USDA *Food Buying Guide.*

Are manufacturers required to CN label products?

There is no Federal requirement that anyone make or purchase CN-labeled products. Purchasing decisions are left to the local level. If a CN-labeled product is desired, this must be clearly stated in purchasing specifications.

What are the advantages of using CN labels?

- A CN label statement clearly identifies the contribution of a product toward the meal pattern requirements. It protects you from exaggerated claims about a product.
- A CN label provides a warranty against audit claims, if used according to the manufacturer's directions.

Do CN-labeled products cost more?

They should not. Cost comparison between two meat products should be based on the cost per ounce or pound that *contributes* to the meal pattern requirements, not on the *product* cost per ounce or pound.

How do I identify a CN label?

A CN label will always contain the following:

- The CN logo, which is a distinct border.
- The meal pattern contribution statement.
- A 6-digit product identification number.
- USDA/FNS authorization.
- The month and year of approval.

For more information:

For additional information about the CN Labeling Program, contact:

U.S. Department of Agriculture
Nutrition and Technical Services Division
Food and Nutrition Service
3101 Park Center Drive - Room 607
Alexandria, VA 22302
Telephone: (703) 305-2556

APPENDIX 7:
Foods of Minimal Nutritional Value

The following are excerpts from Federal program regulations. The regulations are published in the *Code of Federal Regulations (CFR)*. Section 210.11 refers to school lunch; Section 220.12 refers to school breakfast. An Appendix B follows each.

7 CFR Sec. 210.11 Competitive food services

(a) Definitions. For the purpose of this section:

(1) Competitive foods means any foods sold in competition with the Program to children in food service areas during the lunch periods.

(2) Food of minimal nutritional value means: (i) In the case of artificially sweetened foods, a food which provides less than five percent of the Reference Daily Intakes (RDI) for each of eight specified nutrients per serving; and (ii) in the case of all other foods, a food which provides less than five percent of the RDI for each of eight specified nutrients per 100 calories and less than five percent of the RDI for each of eight specified nutrients per serving. The eight nutrients to be assessed for this purpose are — protein, vitamin A, vitamin C, niacin, riboflavin, thiamine, calcium, and iron. All categories of food of minimal nutritional value and petitioning requirements for changing the categories are listed in appendix B of this part.

(b) General. State agencies and school authorities shall establish such rules or regulations as are necessary to control the sale of foods in competition with lunches served under the Program. Such rules or regulations shall prohibit the sale of foods of minimal nutritional value, as listed in appendix B of this part, in the food service areas during the lunch periods. The sale of other competitive foods may, at the discretion of the State agency and school food authority, be allowed in the food service area during the lunch period only if all income from the sale of such foods accrues to the benefit of the nonprofit school food service or the school or student organizations approved by the school. State agencies and school food authorities may impose additional restrictions on the sale of and income from all foods sold at any time throughout schools participating in the Program.

APPENDIX B TO PART 210—CATEGORIES OF FOODS OF MINIMAL NUTRITIONAL VALUE

(a) *Foods of minimal nutritional value* - Foods of minimal nutritional value are:

(1) *Soda Water* — A class of beverages made by absorbing carbon dioxide in potable water. The amount of carbon dioxide used is not less than that which will be absorbed by the beverage at a pressure of one atmosphere and at a temperature of 60 degrees F. It either contains no alcohol or only such alcohol, not in excess of 0.5 percent by weight of the

finished beverage, as is contributed by the flavoring ingredient used. No product shall be excluded from this definition because it contains artificial sweeteners or discrete nutrients added to the food such as vitamins, minerals and protein.

(2) *Water Ices* — As defined by 21 CFR 135.160 Food and Drug Administration Regulations except that water ices which contain fruit or fruit juices are not included in this definition.

(3) *Chewing Gum* — Flavored products from natural or synthetic gums and other ingredients which form an insoluble mass for chewing.

(4) *Certain Candies* — Processed foods made predominantly from sweeteners or artificial sweeteners with a variety of minor ingredients which characterize the following types:

(i) *Hard Candy* — A product made predominantly from sugar (sucrose) and corn syrup which may be flavored and colored, is characterized by a hard, brittle texture, and includes such items as sour balls, fruit balls, candy sticks, lollipops, starlight mints, after dinner mints, sugar wafers, rock candy, cinnamon candies, breath mints, jaw breakers and cough drops.

(ii) *Jellies and Gums* — A mixture of carbohydrates which are combined to form a stable gelatinous system of jelly-like character, and are generally flavored and colored, and include gum drops, jelly beans, jellied and fruit-flavored slices.

(iii) *Marshmallow Candies* — An aerated confection composed as sugar, corn syrup, invert sugar, 20 percent water and gelatin or egg white to which flavors and colors may be added.

(iv) *Fondant* — A product consisting of microscopic-sized sugar crystals which are separated by thin film of sugar and/or invert sugar in solution such as candy corn, soft mints.

(v) *Licorice* — A product made predominantly from sugar and corn syrup which is flavored with an extract made from the licorice root.

(vi) *Spun Candy* — A product that is made from sugar that has been boiled at high temperature and spun at a high speed in a special machine.

(vii) *Candy Coated Popcorn* — Popcorn which is coated with a mixture made predominantly from sugar and corn syrup.

(b) *Petitioning Procedures* — Reconsideration of the list of foods of minimal nutritional value identified in paragraph (a) of this section may be pursued as follows:

(1) Any person may submit a petition to FCS requesting that an individual food be exempted from a category of foods of minimal nutritional value listed in paragraph (a). In the case of artificially sweetened foods, the petition must include a statement of the percent of Reference Daily Intake (RDI) for the eight nutrients listed in sec. 210.11(a)(2) "Foods of minimal nutritional value," that the food provides per serving and the petitioner's source of this information. In the case of all other foods, the petition must include a statement of the

percent of RDI for the eight nutrients listed in sec. 210.11(a)(2) "Foods of minimal nutritional value," that the food provides per serving and per 100 calories and the petitioner's source of this information. The Department will determine whether or not the individual food is a food of minimal nutritional value as defined in sec. 210.11(a)(2) and will inform the petitioner in writing of such determination, and the public by notice in the *FEDERAL REGISTER* as indicated below under paragraph (b)(3) of this section. In determining whether an individual food is a food of minimal nutritional value, discrete nutrients added to the food will not be taken into account.

(2) Any person may submit a petition to FCS requesting that foods in a particular category of foods be classified as foods of minimal nutritional value as defined in sec. 210.11(a)(2). The petition must identify and define the food category in easily understood language, list examples of the food contained in the category and include a list of ingredients which the foods in that category usually contain. If, upon review of the petition, the Department determines that there is a substantial likelihood that the foods in that category should be classified as foods of minimal nutritional value as defined in sec. 210.11(a)(2), the Department shall at that time inform the petitioner. In addition, the Department shall publish a proposed rule restricting the sale of foods in that category, setting forth the reasons for this action, and soliciting public comments. On the basis of comments received within 60 days of publication of the proposed rule and other available information, the Department will determine whether the nutrient composition of the foods indicates that the category should be classified as a category of foods of minimal nutritional value. The petitioner shall be notified in writing and the public shall be notified of the Department's final determination upon publication in the *FEDERAL REGISTER* as indicated under paragraph (b)(3) of this section.

(3) By May 1 and November 1 of each year, the Department will amend appendix B to exclude those individual foods identified under paragraph (b)(1) of this section, and to include those categories of foods identified under paragraph (b)(2) of this section, *provided,* that there are necessary changes. The schedule for amending appendix B is as follows:

Actions for publication	*Publication*	
	May	*November*
Deadline for receipt of petitions by USDA	Nov. 15	May 15
USDA to notify petitioners of results of Departmental review and publish proposed rule (if applicable)	Feb. 1	Aug. 1
60 Day comment period	Feb. 1 through Apr. 1	Aug. 1 through Oct. 1
Public notice of amendment of Appendix B by.....	May 1	Nov. 1

(4) Written petitions should be sent to the Chief, Technical Assistance Branch, Nutrition and Technical Services Division, FCS, USDA, Alexandria, Virginia 22302, on or before November 15 or May 15 of each year. Petitions must include all information specified in paragraph (b) of this appendix and sec. 220.12(b)(1) or (2) as appropriate.

7 CFR Sec. 220.12 Competitive food services

(a) State agencies and School Food Authorities shall establish such rules or regulations as are necessary to control the sale of foods in competition with breakfasts served under the Program. Such rules or regulations shall prohibit the sale of foods of minimal nutritional value, as listed in appendix B of this part, in the food service areas during the breakfast periods. The sale of other competitive foods may, at the discretion of the State agency and the School Food Authority, be allowed in the food service area during the breakfast period only if all income from the sale of such foods accrues to the benefit of the nonprofit school food service or the school or student organizations approved by the school. State agencies and School Food Authorities may impose additional restrictions on the sale of and income from all foods sold at any time throughout schools participating in the School Breakfast Program.

(b)(1) Any person may submit a petition to FCS requesting that an individual food be exempted from a category of foods of minimal nutritional value listed in appendix B. In the case of artificially sweetened foods, the petition must include a statement of the percent of RDI for the eight nutrients listed in sec. 220.2(i-1) that the food provides per serving and the petitioner's source of this information. In the case of all other foods, the petition must include a statement of the percent of RDI for the eight nutrients listed in sec. 220.2(i-1) that the food provides per serving and per 100 calories and the petitioner's source of this information. The Department will determine whether or not the individual food is a food of minimal nutritional value as defined in sec. 220.2(i-1), and will inform the petitioner in writing of such determination, and the public by notice in the *FEDERAL REGISTER* as indicated under paragraph (b)(3) of this section. In determining whether an individual food is a food of minimal nutritional value, discrete nutrients added to the food will not be taken into account.

(2) Any person may submit a petition to FCS requesting that foods in a particular category of foods be classified as foods of minimal nutritional value as defined in sec. 220.2(i-1). The petition must identify and define the food category in easily understood language, list examples of the foods contained in the category and include a list which the foods in that category usually contain. If, upon review of the petition, the Department determines that the foods in that category should not be classified as foods of minimal nutritional value, the petitioner will be so notified in writing. If upon review of the petition, the Department determines that there is a substantial likelihood that the foods in that category should be classified as foods of minimal nutritional value as defined in sec. 220.2(i-1), the Department shall at that time inform the petitioner. In addition, the Department shall publish a proposed rule restricting the sale of the foods in that category, setting forth the reasons for this section, and soliciting public comments. On the basis of comments received within 60 days of publication of the proposed rule and other available information, the Department will determine whether the nutrient composition of the foods indicates that the category should be classified as a category of foods of minimal nutritional value. The petitioner shall be

notified in writing and the public shall be notified of the Department's final determination upon publication in the *FEDERAL REGISTER* as indicated under section (b)(3) of this section.

(3) By May 1 and November 1 of each year, the Department shall amend appendix B to exclude those individual foods identified under paragraph (b)(1) of this section, and to include those categories of foods identified under paragraph (b)(2) of this section, provided that there are necessary changes.

APPENDIX B TO PART 220 — CATEGORIES OF FOODS OF MINIMAL NUTRITIONAL VALUE

(1) *Soda Water* — A class of beverages made by absorbing carbon dioxide in potable water. The amount of carbon dioxide used is not less than that which will be absorbed by the beverage at a pressure of one atmosphere and at a temperature of 60 degrees F. It either contains no alcohol or only such alcohol, not in excess of 0.5 percent by weight of the finished beverage, as is contributed by the flavoring ingredient used. No product shall be excluded from this definition because it contains artificial sweeteners or discrete nutrients added to the food such as vitamins, minerals and protein.

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(b) *Jellies and Gums* — A mixture of carbohydrates which are combined to form a stable gelatinous system of jelly-like character, and are generally flavored and colored, and include gum drops, jelly beans, jellied and fruit-flavored slices.

(c) *Marshmallow Candies* — An aerated confection composed as sugar, corn syrup, invert sugar, 20 percent water and gelatin or egg white to which flavors and colors may be added.

(d) *Fondant* — A product consisting of microscopic-sized sugar crystals which are separated by thin film of sugar and/or invert sugar in solution such as candy corn, soft mints.

(e) *Licorice* — A product made predominantly from sugar and corn syrup which is flavored with an extract made from the licorice root.

(f) *Spun Candy* — A product that is made from sugar that has been boiled at high temperature and spun at a high speed in a special machine.

(g) *Candy Coated Popcorn* — Popcorn which is coated with a mixture made predominantly from sugar and corn syrup.

Schedule for Amending Appendix B

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Deadline for receipt of petitions by USDA	Nov. 15	May 15
USDA to notify petitioners of results of Departmental review and publish proposed rule (if applicable)	Feb. 1	Aug. 1
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Public notice of amendment of Appendix B by.....	May 1	Nov. 1

(4) Written petitions should be sent to the Chief, Technical Assistance Branch, Nutrition and Technical Services Division, FCS, USDA, Alexandria, Virginia 22302, on or before November 15 or May 15 of each year. [Petitions must include all information specified in sec. 210(B)(b)(1) or (2) and sec. 220.12(b) (1) or (2) as appropriate.]

APPENDIX 8:
Milk Requirement for School Lunch

The following is a copy of a memorandum distributed by USDA's Food and Nutrition Service (FNS) on February 9, 1998. The memo explains changes in the Food and Drug Administration's labeling requirements for "low-fat" and "reduced-fat" milk (effective January 1, 1998).

As the memo states, this change in labeling requirements does not require schools to change their current milk selections. However, it does provide schools with the opportunity to offer children low-fat milk with lower fat content than in the past.

SUBJECT: Milk Requirement under the National School Lunch Program (SP98-2)

TO: Regional Directors
Special Nutrition Programs
All Regions

Section 9(a)(2)(B) of the National School Lunch Act requires schools to offer, as part of a reimbursable lunch, "...a variety of fluid milk consistent with prior year preferences unless the prior year preference for any such variety of fluid milk is less than 1 percent of the total milk consumed at the school." Under this provision, which was enacted in 1994, schools must offer whole milk and low-fat milk, previously stipulated in the law, as well as other types of fluid milk, such as flavored milk or skim milk, that have proven popular with children. This statutory mandate was incorporated into the National School Lunch Program regulations in 1995.

When Congress enacted this provision, the term "low-fat" applied to milk with a designated fat content of between .5 percent and 2 percent. Beginning on January 1, 1998, the Food and Drug Administration (FDA) revised its labeling requirements to be in line with the general requirements of the Nutrition Labeling and Education Act. Under these new requirements, the term "low-fat" applies only to milk with a designated fat content of about 1 percent or less. For milk with a designated fat content of about 2 percent, the new term "reduced fat" is now applied. Consequently, there has been some question about what effect this change in labeling terminology may have on schools' milk purchasing practices.

The FDA's revision of milk labeling requirements does not require schools to change their current milk selections. However, it does provide schools with the opportunity to offer children low-fat milk with lower fat content than in the past. Schools may, therefore, offer children milk meeting the new definition of low-fat in place of milk meeting the prior definition. This means that schools may offer milk with a designated fat content of about 1 percent or less and meet the low-fat milk requirement. This complies with the intent of the

statutory provision, which is to provide schools with flexibility in menu planning while encouraging milk consumption by ensuring that children continue to be able to choose from a variety of milk types and allowing schools to discontinue unpopular types of milk.

STANLEY C. GARNETT
Director
Child Nutrition Division

APPENDIX 9:
A Look at Major Nutrients

Here are some facts about major nutrients, including what they contribute to good health and in what foods they are found. The nutrients are organized in seven groups:

1. **Carbohydrates**
2. **Proteins**
3. **Fats**
4. **Vitamins**
5. **Macrominerals**
6. **Microminerals**
7. **Water**

While you are not required to use this information to plan healthy school meals, it may be useful as a resource to share with teachers. Similarly, although some of the food sources listed may be less suitable for school meals than others, they might be appropriate for nutrition education activities.

1. Carbohydrates

- Supply energy (4 calories per gram).
- Spare proteins to be used for growth and maintenance of body tissues rather than energy.
- Provide fiber.

Food sources include:
Complex carbohydrate foods include breads, cereals, pasta, rice, and starchy vegetables such as potatoes, corn, and lima beans.

Simple carbohydrate foods include sugar, honey, syrup, candy, soft drinks, icings, and fruit.

2. Proteins

- Build and repair body tissues.
- Help antibodies fight infection.
- Supply energy (4 calories per gram) if more is consumed than needed to build and repair body tissues.

Food sources include:
Meat, poultry, and fish
Eggs
Milk, yogurt, and cheese
Dried beans and peas
Nuts and nut butters

3. Fats

- Supply the most concentrated source of energy (9 calories per gram).
- Carry fat-soluble vitamins A, D, E, and K.
- Provide feeling of fullness and satisfaction since fats take longer to digest.

Food sources include:
Oils and shortening
Butter and margarine
Mayonnaise and salad dressings
Table cream and sour cream
Lard

4. Vitamins

Vitamin C (Ascorbic Acid)

- Helps form cementing substances such as collagen that hold body cells together, thus strengthening blood vessels and hastening healing of wounds and bones.
- Increases resistance to infections.
- Helps body absorb iron in the diet.

Food sources include:
Cantaloupe, grapefruit, grapefruit juice, honeydew melon, kiwi fruit, mandarin orange sections, mango, orange juice, papaya, strawberries, tangerines, asparagus, broccoli, brussels sprouts, cabbage, cauliflower, kale, sweet green and red peppers, sweet potatoes

Thiamin (B1)

- Helps body cells obtain energy from food.
- Helps keep nerves healthy.
- Promotes good appetite and digestion.

Food sources include:
Meat, poultry, and fish
Dried beans and peas
Nuts
Enriched and whole-grain breads and cereals

Riboflavin (B2)

- Helps cells use oxygen to release energy from food.
- Helps keep eyes healthy and vision clear.
- Helps keep skin around mouth and nose healthy.

Food sources include:
Milk
Liver
Meat, poultry, and fish
Eggs
Green leafy vegetables

Niacin (B3)

- Helps cells use oxygen to release energy from food.
- Maintains health of skin, tongue, digestive tract, and nervous system.

Food sources include:
Liver, meat, poultry, and fish
Peanuts and peanut butter
Dried beans and dried peas
Enriched and whole-grain breads and cereals

Vitamin A

- Helps keep eyes healthy and able to adjust to dim light.
- Helps keep skin healthy.
- Helps keep lining of mouth, nose, throat and digestive tract healthy and resistant to infection.
- Promotes growth.

Food sources include:
Liver
Dark green and deep yellow vegetables
(such as broccoli, collards and other green leafy vegetables, carrots, pumpkin, sweet potatoes, winter squash)
Butter and fortified margarine
Whole milk, vitamin A-fortified nonfat milk, vitamin A-fortified lowfat milk

Vitamin D

- Helps body absorb calcium.
- Helps body build strong bones and teeth.

Food sources include:
Vitamin-D fortified milk

In addition:
Exposure to sunlight is another source of Vitamin D.
(Vitamin D is produced in the skin with stimulus of sun.)

Folate (Folic Acid or Folacin)
- Helps body produce normal red blood cells.
- Helps in the biochemical reactions of cells in the production of energy.

Food sources include:
Wheat germ, wheat bran
Leafy green vegetables
Liver
Legumes

Biotin
- Essential in the breakdown of carbohydrates, lipids, and proteins in the body.

Food sources include:
Liver, kidneys
Egg yolk
Vegetables and fruits (especially bananas, grapefruits, watermelon, and strawberries)

Pantothenic Acid
- Aids in the metabolism of fat.
- Aids in the formation of cholesterol and hormones.

Food sources include:
Liverwurst, meats, poultry, egg yolk
Wheat germ and rice germ
Tomato paste
Sweet potatoes
Oatmeal
Milk

Pyridoxine (B6)
- Needed to help nervous tissues function normally.
- Helps to maintain the health of the skin and red blood cells.
- Assists in the metabolism of proteins, carbohydrates, and fats.

Food sources include:
Liver, lean meats
Cereals
Vegetables
Milk

Cyanocobalamin (Bl2)
- Necessary in the development of normal growth.
- Helps in the metabolism of folate.
- Helps protect against pernicious anemia.
  (Pernicious anemia primarily results from the body's inability to absorb vitamin B12. However, it can result from a deficiency of vitamin B12 in the diet.)

Food sources include:
Liver
Clams, oysters
Meats, eggs, chicken
Milk

5. Macrominerals

Calcium
- Needed for bone rigidity.
- Helps in blood clotting.
- Aids in muscle contraction, normal nerve functions.

Food sources include:
Milk — nonfat, lowfat, and whole
Yogurt
Cheese
Green leafy vegetables such as kale, collards, mustard greens, and turnip greens

Phosphorous
- Helps build strong bones and teeth.
- Aids in all phases of calcium metabolism.

Food sources include:
Meat, poultry, liver, fish
Eggs, milk and other dairy products
Raw oranges, cherries, peaches
Rice, potatoes
Wheat flour

Magnesium
- Helps regulate body temperature, muscle contractions, and the nervous system.
- Helps cells utilize carbohydrates, fats, and proteins.

Food sources include:
Green leafy vegetables
Nuts — including brazil nuts, almonds, and cashews
Meats, beef liver
Salmon
Cheddar cheese, milk, eggs
Dry beans and peas

Sodium, Chloride, Potassium

These three work together to:

- Regulate the flow of fluids in the body.
- Help regulate the nervous system.
- Help regulate the muscle functions, including heart.
- Help regulate nutrient absorption in the cells.

Food sources include:
Sodium and chloride are found in table salt.
Potassium is found in meats, milk, bananas, leafy green vegetables, and citrus fruits.

6. Microminerals

Iron

- Combines with protein in the blood to form hemoglobin.

Food sources include:
Liver and other organ meats, egg yolks
Dried legumes, leafy green vegetables
Shellfish
Enriched breads

Zinc

- Helps lungs release oxygen.

Food sources include:
Oysters
Herring
Egg yolks
Organ meats

Copper

- Necessary in the formation of hemoglobin.

Food sources include:
Liver
Bran flakes
Cocoa powder

Manganese

- Necessary for normal development of bones and connective tissues.

Food sources include:
Nuts
Rice, whole grains
Beans
Leafy green vegetables

Selenium
- Works in conjunction with vitamin E to protect cells from destruction.

Food sources include:
Fish, organ meats, shellfish
Eggs
Grains and plants grown in selenium-rich soil

Chromium
- Maintains normal glucose uptake into cells.
- Helps insulin bind to cells.

Food sources include:
Vegetable oils
Egg yolks
Whole grains
Meats

Iodine
- Needed by thyroid gland to produce thyroxine, which is essential for the oxidation rates of cells.

Food sources include:
Iodized salt
Ocean fish
Seaweed
Milk

Fluoride
- Helps prevent tooth decay.

Sources include:
Fluoridated drinking water
Seafood
Tea
Fruits and vegetables grown in areas where natural fluoride level in the water is high
Fluoridated toothpaste

7. Water

- Is essential for life.
- Represents two-thirds of our body weight.
- Is part of every living cell.
- Is the medium for all metabolic changes (digestion, absorption, and excretion).
- Transports nutrients and all body substances.
- Helps maintain body temperature.
- Acts as a lubricant.

Sources include:
Drinking water
Liquid foods
Water in foods
Water released when carbohydrates, protein, and fats are metabolized in the body

APPENDIX 10:
How to Evaluate a Supplier of Value-Added Produce

Value-added (fresh cut) produce is a ready-to-use fruit or vegetable. Using value-added produce can save you time and make it easier to serve fresh fruits and vegetables. Like many other foods, however, pre-cut produce can be a vehicle for food-borne illness if improperly stored or handled. To help you evaluate a supplier of pre-cut produce, here are some tips on sanitation, temperature, and dating:

■ **Sanitation:** Pre-cut produce can become contaminated in a variety of ways, including from soil, dirty water, or contaminated processing equipment.

The supplier's ability to keep the processing facility and food handling equipment clean and sanitized is critical in preparing safe, fresh-cut produce. The supplier should have an ongoing food safety and sanitation inspection program.

■ **Temperature Control:** For safety and quality, produce must be stored at certain temperatures. It must be kept as cold as possible (without freezing) from farm to refrigerated case. If produce is contaminated with food-borne pathogens, proper temperature control will slow their growth.

Also, fresh-cut produce that has been exposed to temperatures of 40° F or above for short periods of time will spoil more quickly. Spoiled produce should always be removed to prevent the spread of the spoilage.

■ **Dating:** The supplier should have a good dating code system in place. A product can be labeled by one of two date code systems: one will show a "packed on" date, the other a "use by" date. For food safety reasons, always discard or reject fresh-cut product if the product is outdated.

Speedy distribution is vital. Check to see how long the produce you are purchasing will be in transit. To understand how the transit time affects the shelf life and date code, look at this example: If a product has 14 days of shelf life and 10 days of transit time, the product will be delivered to your school with only 4 days of shelf life.

Be sure to check date codes upon delivery and rotate properly on a "first in, first out" basis.

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